Air Quality Analysis Technical Report

MD 22 from East of I-95 To East of MD 462

August 1, 2012

MD 22
FROM EAST OF I-95
TO
EAST OF MD 462

AIR QUALITY ANALYSIS
TECHNICAL REPORT

August 1, 2012

Harford County, Maryland

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

TABLE OF CONTENTS

I. INTRODUCTION

A. PURPOSE 1
B. PROPOSED IMPROVEMENTS 1

II. ENVIRONMENTAL ANALYSIS

A. AFFECTED ENVIRONMENT 2
1. Clean Air Act Amendments of 1990 2
2. National and State Ambient air Quality Standards 2
3. Recent EPA Rules and Guidelines 2
4. Criteria Pollutants and Effects 4
5. Mobile Source Air Toxics 5
6. Greenhouse Gases 7
7. National Ambient Air Quality Standards (NAAQS) Attainment Status 7
8. Ambient Air Quality in the Study Area 9
a. Local Meteorology 9
b. Monitored Air Quality Data 9

B. ENVIRONMENTAL CONSEQUENCES 12
1. Introduction 12
2. Carbon Monoxide (CO) Assessment 12
3. Particulate Matter ($PM_{2.5}$) Assessment 13
4. $PM_{2.5}$ Conformity Determination 15
5. MSAT Assessment 16
a. Project Specific MSAT Information 17
b. Unavailable or Incomplete Information 17
c. Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs 18
d. Relevance of Unavailable or Incomplete Information 19
e. Sensitive Receptor Assessment 19
f. Summary 20
6. Greenhouse Gas Assessment 21
a. NEPA Assessment 21
b. Greenhouse Gas Reduction Act of 2009 21
7. Construction Impacts 22
8. Agency Coordination / Interagency Consultation 22

III. CONCLUSIONS 23

APPENDICES

Appendix A: Monitored Ambient Air Quality Data: Maryland
Appendix B: Monitored Ambient Air Quality Data: Delaware
Appendix C: Traffic Data
Appendix D: Interagency Consultation

LIST OF TABLES

TABLE 1: National Ambient Air Quality Standards 6
TABLE 2: Attainment Classifications and Definitions 7
TABLE 3: Ambient Air Quality Monitoring Data 2009-2011 ..... 10 & 11
TABLE 4: MD 22 Traffic Data 13
TABLE 5: National MSAT Emission Trends 1999-2050 17
TABLE 6: MSAT Sensitive Receptor 20

LIST OF FIGURES

FIGURE 1: Location Map ..... After page 1
FIGURE 2: Project Mapping ..... After Page 1
FIGURE 3: MSAT Sensitive Site 20

MD 22 FROM EAST OF I-95 TO EAST OF MD 462

AIR QUALITY ANALYSIS
***TECHNICAL REPORT** – August 2012*

I. INTRODUCTION

A. PURPOSE

This report presents the results of a multi-faceted review of air quality impacts associated with the proposed widening of intersection improvements for MD 22 from east of I-95 to east of MD 462 in Harford County, Maryland. The study is intended as an evaluation of the project level air quality impacts of the proposed improvements along with a discussion of regional analyses. This evaluation is provided to meet the requirements of the Clean Air Act (CAA) and the National Environmental Policy Act (NEPA).

The MD 22 study area is located in Harford County and extends, in an easterly direction from east of I-95 to east of MD 462. The project includes the Beards Hill Road, Middleton Road, and MD 462 intersections (Refer to Figures 1 and 2). Land use in the vicinity of Beards Hill Road is primarily commercial, while land use in the vicinity of MD 462 is primarily residential. Commercial areas include a combination of retail, hotel/motel and food service uses. Residential properties are comprised mainly of neighborhoods of single-family homes. The overall study area is approximately 1.25 miles in length.

B. PROPOSED IMPROVEMENTS

The proposed improvements for MD 22 involves adding a third through lane to MD 22 in both the eastbound and westbound directions by widening to the outside from east of I-95 to east of MD 462. An additional left turn lane from MD 22 eastbound to Beards Hill Road northbound will be added by a combination of widening into the median and shifting the eastbound lanes. A single left turn lane will be maintained for MD 22 westbound to Beards Hill Road southbound. The existing MD 22 median, east of the intersection will be widened to account for opposing eastbound double left turn lanes. The proposed improvements on Beards Hill Road are to widen the existing single left turn lanes to double left turn lanes on each approach to MD 22. Minimal pavement widening is required on Beards Hill Road. New curb/gutter and raised concrete median will be constructed on Beards Hill Road. A new sidewalk will be constructed adjacent to the northbound roadway. The outside lanes on Beards Hill Road will be widened to accommodate bicycles. An existing traffic signal will be upgraded at the intersection. At MD 462, single left turn lanes will be maintained from MD 22 eastbound to MD 462 northbound and from MD 22 westbound to MD 462 southbound. A lengthened right turn lane on MD 22 is proposed from MD 22 westbound to MD 462 northbound. MD 22 west of MD 462 will remain a closed section with new curb/gutter and sidewalk. MD 22 east of MD 462 will remain an open section with traffic barrier w-beam installed along MD 22 westbound. The proposed improvements on MD 462 are to widen the existing shared through/right turn lane and left turn lane into two double left turn lanes, a through lane and separate right turn lane on the southbound approach to MD 22. A new right turn lane will be added to the existing single left turn lane and shared through/right turn lane on MD 462 northbound approach to MD 22. Pavement widening is required on both sides of MD 462 to accommodate the additional lanes. New curb/gutter and sidewalk will be constructed on MD 462. The existing sidewalk on the west side of MD 462 will be extended to connect to adjoining side streets. The outside lanes on MD 462 will be widened to accommodate bicycles. The existing traffic signal will be upgraded at the intersection. Existing roads within the project limits will be ground and overlaid. In order to accomplish all of these improvements 18 parcels will need to be acquired.

Figure 1
Location Plan

BRAC INTERSECTION IMPROVEMENTS

MD 22 from East of I-95 to East of MD 462 • Harford County, MD

SHA State Highway Administration

N

60 Scale
June 2012
Harford County

LEGEND

- PROPOSED ROADWAY
- PROPOSED RIGHT-OF-WAY
- PROPOSED WIDENING
- PROPOSED SIDEWALK
- EXISTING RIGHT-OF-WAY
- EXISTING PROPERTY LINES
- POTENTIAL RELOCATIONS
- NOISE WALL
- TRAFFIC SIGNALS

SUMMARY OF BENEFITS AND IMPACTS

ENVIRONMENTAL FEATURES		RIGHT-OF-WAY	
Wetlands (Acres)	0	Residential Displacements	0
Streams (Linear Feet)	0	Commercial Displacements	0
Floodplains (Acres)	0	Properties Impacted	11
Parks (Acres)	0	Total Right-of-Way (Acres)	2.20
Forests (Acres)	0		

TRAFFIC OPERATIONS:	AM LOS (DELAY (SEC.)) / PM LOS (DELAY (SEC.))
Existing	C(25) / C(26)
2015 No-Build	D(55) / F(142)
2015 Build	D(36) / D(52)

LANE CONFIGURATION

Existing

Proposed

SUMMARY OF BENEFITS AND IMPACTS

ENVIRONMENTAL FEATURES		RIGHT-OF-WAY	
Wetlands (Acres)	0	Residential Displacements	16
Streams (Linear Feet)	0	Commercial Displacements	0
Floodplains (Acres)	0	Properties Impacted	59
Parks (Acres)	0	Total Right-of-Way (Acres)	5.8
Forests (Acres)	1		

TRAFFIC OPERATIONS:	AM LOS (DELAY (SEC.)) / PM LOS (DELAY (SEC.))
Existing	C(23) / C(24)
2015 No-Build	F(213) / F(88)
2015 Build	D(37) / D(41)

LANE CONFIGURATION

Existing

Proposed

Figure 2

II. ENVIRONMENTAL ANALYSIS

A. AFFECTED ENVIRONMENT

Air pollution is a general term that refers to one or more chemical substances that degrade the quality of the atmosphere. Individual air pollutants degrade the atmosphere by reducing visibility, damaging property, reducing the productivity or vigor of crops or natural vegetation, or harming human or animal health.

1. Clean Air Act Amendments of 1990

The Clean Air Act (CAA) Amendments of 1990 and the Final Transportation Conformity Rule [40 CFR Parts 51 and 93] direct the U.S. Environmental Protection Agency (EPA) to implement environmental policies and regulations that will ensure acceptable levels of air quality. Both the Clean Air Act and the Final Transportation Conformity Rule affect proposed transportation projects.

According to Title I, Section 176 (c) 2:

> *"No federal agency may approve, accept, or fund any transportation plan, program, or project unless such plan, program, or project has been found to conform to any applicable State Implementation Plan (SIP) in effect under this act."*

The Final Conformity Rule defines conformity as follows:

> *"Conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards (NAAQS) and achieving expeditious attainment of such standards; and that such activities will not:*
>
> - *Cause or contribute to any new violation of any NAAQS in any area;*
> - *Increase the frequency or severity of any existing violation of any NAAQS in any area; or*
> - *Delay timely attainment of any NAAQS or any required interim emission reductions or other milestones in any area."*

2. National Ambient Air Quality Standards

As required by the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants. These pollutants, known as criteria pollutants, are carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10} & $PM_{2.5}$), sulfur dioxide (SO_2), and lead (pb). The federal standards are summarized in **Table 1**. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare, and they account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

3. Recent EPA Rules and Guidelines

The Environmental Protection Agency (EPA) has issued a Proposed Rule, a Guidance Clarification, a Final Rule concerning the Conformity Determination of fine and course particulates ($PM_{2.5}$ and PM_{10}), and Draft and Final Rules concerning quantitative analysis of CO and $PM_{2.5}$. Following is a summary of these rules and clarifications:

- **Transportation Conformity Rule $PM_{2.5}$ and PM_{10} Amendments; Proposed Rule** EPA proposed amendments to the transportation conformity rule that primarily affect conformity's implementation in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas. EPA proposed to update the transportation conformity regulation in light of the October 17, 2006 final rule that strengthened the 24-hour $PM_{2.5}$ air quality standard and revoked the annual PM_{10} standard. In addition, EPA proposed to clarify the

regulations concerning hot-spot analyses to address a remand from the Court of Appeals for the District of Columbia Circuit [Environmental Defense v. EPA, 509 F.3d 553 (DC Cir. 2007)]. (74 FR 23034)

- **Final PM Qualitative Guidance Clarification; June 12, 2009**
  On March 29, 2006, the Environmental Protection Agency (EPA) and the Federal Highway Administration (FHWA) issued joint guidance on how to perform qualitative hot-spot analyses in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas titled, '*Transportation Conformity Guidance for Qualitative Hot-spot Analysis in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas'* (March 2006 guidance). The guidance provides information for State and local agencies to meet the $PM_{2.5}$ and PM_{10} hot-spot analysis requirements established in the March 10, 2006, final transportation conformity rule (71 FR 12468). Since issuing the March 2006 guidance, a lawsuit was filed challenging a project's conformity determination, including the project's $PM_{2.5}$ hot-spot analysis that relied on method A (comparison to another location with similar characteristics). Method A is described in question 4.1 of the March 2006 guidance. As part of a settlement agreement on that lawsuit (Environmental Defense, et al. v. USDOT, et al., No. 08-1107 [4th Cir. dismissed Nov. 17. 2008]), FHWA agreed to issue a clarification on a specific schedule, in coordination with EPA, to the March 2006 guidance. This clarification does not supersede the March 2006 guidance or the March 10, 2006 final transportation conformity rule; it only further explains how to implement the existing guidance and the hot-spot analysis requirements in the final rule. The clarification also does not create any new requirements and does not serve as guidance for $PM_{2.5}$ and PM_{10} quantitative hot-spot analyses.

- **Final PM Conformity Rule; March 10, 2010**
  In this action, EPA amended the transportation conformity rule to finalize provisions that were proposed on May 15, 2009. These amendments primarily affect conformity's implementation in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas. EPA updated the transportation conformity regulation in light of an October 17, 2006 final rule that strengthened the 24-hour $PM_{2.5}$ national ambient air quality standard (NAAQS) and revoked the annual PM_{10} NAAQS. In addition, EPA clarified the regulations concerning hot-spot analyses to address a December 2007 remand from the Court of Appeals for the District of Columbia Circuit. This portion of the final rule applies to $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas as well as carbon monoxide nonattainment and maintenance areas. (71 FR 12468)

- **Draft Transportation Conformity Guidance for Quantitative Hot- spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas, May 26, 2010**
  EPA announced the availability of a draft transportation conformity guidance document for public comment. The U.S. Department of Transportation (DOT) is EPA's federal partner in implementing the transportation conformity regulation, and EPA coordinated with DOT on the development of this draft guidance. (75 FR 29537)

- **Final Transportation Conformity Guidance for Quantitative Hot- spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas, December 2010**
  EPA announced the availability of final transportation conformity guidance document for public comment. This guidance will help state and local agencies complete quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses for project-level transportation conformity determinations of certain highway and transit projects. A hot-spot analysis includes an estimation of project-level emissions, air quality modeling, and a comparison to the relevant national ambient air quality standards (NAAQS) in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas. This guidance includes a two-year grace period until December 2012 This guidance describes transportation conformity requirements for hot-spot analyses, and provides technical guidance on estimating project emissions with the Environmental Protection Agency's (EPA's) MOVES model, California's EMFAC model, and other methods (75 FR 79370)

- **Final Transportation Conformity Guidance for Quantitative Hot- spot Analyses in CO Nonattainment and Maintenance Areas, December 2010**
  EPA announced the availability of final transportation conformity guidance document for public comment. This guidance will help state and local agencies complete quantitative CO hot-spot analyses for project- level transportation conformity determinations of certain highway and transit projects. A hot-spot analysis includes an estimation of project-level emissions, air quality modeling, and a comparison to the relevant national ambient air quality standards (NAAQS) in CO nonattainment and maintenance areas. This guidance includes a two-year grace period until December 2012. The purpose of this guidance is to describe how to use the MOVES emissions model to estimate carbon monoxide (CO) emissions from transportation projects, including roadway intersections, highways, transit projects, parking lots and intermodal terminals.
  (75 FR 79370)
- **Transportation Conformity Rule Restructuring Amendments, March 2012**
  EPA's conformity rule (40 CFR Parts 51.390 and 93 Subpart A) establishes the criteria and procedures for determining whether transportation activities conform to the SIP. EPA is amending the conformity rule so that its requirements will clearly apply to areas designated for any future new or revised NAAQS. To achieve this, the final rule restructures two sections of the conformity rule, 40 CFR 93.109 and 93.119, and makes changes to certain definitions in 40 CFR 93.101. EPA is also finalizing a change to the wording of conformity rule section 93.118(b) that does not change its requirements. (77 FR 14979)
- **Transportation Conformity Regulations as of April 2012**
  This document includes the current transportation conformity rules that reflect all transportation conformity rulemakings promulgated by EPA as of April 2012, including the Restructuring Amendments final rulemaking, and the MOVES Regional Grace Period Extension final rulemaking.

4. Criteria Pollutants and Effects

Pollutants that have established national standards are referred to as "criteria pollutants." The sources of these pollutants, their effects on human health and the nation's welfare, and their final deposition in the atmosphere vary considerably. A brief description of each pollutant is provided below.

- **Carbon Monoxide.** Carbon monoxide (CO) is a colorless gas that interferes with the transfer of oxygen to the brain. Carbon monoxide is emitted almost exclusively from the incomplete combustion of fossil fuels.

- **Lead.** Lead (pb) is a stable element that persists and accumulates both in the environment and in animals. Its principal effects in humans are on the blood-forming, nervous, and renal systems. Lead levels in the urban environment from mobile sources have decreased significantly due to the federally mandated switch to lead-free gasoline. Lead was primarily in gasoline in the form of tetraethyl lead.

- **Particulate Matter**. Particulate pollution is composed of solid particles or liquid droplets that are small enough to remain suspended in the air. In general, particulate pollution can include dust, soot, and smoke; these can be irritating but usually are not poisonous. Particulate pollution also can include bits of solid or liquid substances that can be highly toxic. Of particular concern are those particles that are smaller than, or equal to, 10 microns (PM_{10}) and 2.5 microns ($PM_{2.5}$) in size. In the case of $PM_{2.5,}$ the combustion of fossil fuels accounts for a significant portion of this pollutant. The main health effect of airborne particulate matter is on the respiratory system.

- **Ozone (O_3)** Ozone is a colorless toxic gas. O_3 is found in both the Earth's upper and lower atmospheric levels. In the upper atmosphere, O_3 is a naturally occurring gas that helps to prevent the sun's harmful ultraviolet rays from reaching the Earth. In the lower layer of the atmosphere, O_3 is man-made. Although O_3 is not directly emitted, it forms in the lower atmosphere through a

chemical reaction between hydrocarbons (HC), also referred to as volatile organic compounds or VOCs, and nitrogen oxides (NOx), which are emitted from industrial sources and from automobiles.

- **Sulfur Dioxide.** Sulfur dioxide (SO_2) is a product of high-sulfur fuel combustion. The main sources of SO_2 are coal and oil used in power stations, industry, and domestic heating. Industrial chemical manufacturing is another source of SO_2. Sulfur dioxide is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. Sulfur dioxide can also yellow plant leaves and corrode iron and steel.

- **Nitrogen Dioxide**. Nitrogen dioxide (NO_2) is a brownish gas that irritates the lungs. It can cause breathing difficulties at high concentrations. As with O_3, NO_2 is not directly emitted, but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. Nitric oxide and NO_2 are collectively referred to as nitrogen oxides (NOx) and are major contributors to ozone formation. NO_2 also contributes to the formation of $PM_{2.5}$.

5. Mobile Source Air Toxics

In addition to the criteria pollutants for which there are NAAQS, EPA also regulates air toxics. Toxic air pollutants are those pollutants known or suspected to cause cancer or other serious health effects. 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). The Clean Air Act (CAA) identified 188 air toxics. In 2001 EPA identified a list of 21 Mobile Source Air Toxics (MSAT) and highlighted six of these MSATs as priority MSATs. Since 2001, EPA has conducted an extensive review of the literature to produce a list of the compounds identified in the exhaust or evaporative emissions from on-road and non-road equipment, as well as alternative fuels. This list currently includes approximately 1,000 compounds; many emitted in trace amounts.

In February 2007, EPA finalized a rule to reduce hazardous air pollutants from mobile sources (*Control of Hazardous Air Pollutants from Mobile Sources*, February 9, 2007). The rule limits the benzene content of gasoline and reduces toxic emissions from passenger vehicles and gas cans. EPA estimates that in 2030 this rule would reduce total emissions of MSATs by 330,000 tons and VOC emissions (precursors to ozone and $PM_{2.5}$) by more than one million tons.

EPA's existing programs will reduce MSATs by more than one million tons from 1999 levels. In addition to controlling pollutants, such as hydrocarbons, particulate matter, and nitrogen oxides, EPA's recent regulations controlling emissions from highway vehicles and non-road equipment will result in large air toxic reductions. Furthermore, EPA has programs under development that would provide additional benefits from further controls for small non-road gasoline engines and diesel locomotive and marine engines. Finally, EPA has developed a variety of programs to reduce risk in communities, such as Clean School Bus USA, the Voluntary Diesel Retrofit Program, Best Workplaces for Commuters, and National Clean Diesel Campaign.

TABLE 1
NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

Pollutant	Primary/ Secondary	Primary Standards		Form
		Level	Averaging Time	
Carbon Monoxide 76 FR 66964	Primary	9 ppm	8-hour	Not to be exceeded more than once per year
		35 ppm	1-hour	
Lead 73 FR 669964	Primary and Secondary	0.15 µg/m^3 (1)	Rolling 3-Month Average	Not to be exceeded
Nitrogen Dioxide 75 FR 6464	Primary	100 ppb	1-hour	98th percentile, averaged over 3 years
	Primary and Secondary	53 ppb (2)	Annual	Annual Mean
Particulate Matter (PM_{10}) 71 FR 61144	Primary and Secondary	150 µg/m^3	24-hour	Not to be exceeded more than once per year on average over 3 years
Particulate Matter ($PM_{2.5}$) 71 FR 61144	Primary and Secondary	15 µg/m^3	Annual	Annual mean averaged over 3 years
		35 µg/m^3	24-hour	98th percentile, averaged over 3 years
Ozone 73 FR 16436	Primary and Secondary	0.075 ppm (3)	8-hour	Annual fourth highest daily maximum 8-hour concentration, averaged over 3 years
Sulfur Dioxide 75 FR 35520	Primary	75 ppb (4)	1-hour	Not to be exceeded more than once per year
	Secondary	0.5 ppm	3-hour	

1) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

(2) The official level of the annual NO_2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.

(3) Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. In 1997, EPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard ("anti-backsliding"). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.

(4) Final rule signed June 2, 2010. The 1971 annual and 24-hour SO_2 standards were revoked in that same rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

6. Greenhouse Gases

Gases that trap heat in the atmosphere are often referred to as greenhouse gases. Greenhouse gases are necessary to life, as we know it, because they keep the planet's surface warmer than it otherwise would be. This is referred to as the Greenhouse Effect. As concentrations of greenhouse gases are increasing, however, the Earth's temperature appears to be increasing. Some of the warming in recent decades is possibly the result of human activities. Other aspects of the climate are also changing, such as rainfall patterns, snow and ice cover, and sea level. Some greenhouse gases, such as carbon dioxide, occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities include carbon dioxide, methane, nitrous oxide, and fluorinated gases.

Greenhouse gases differ in their ability to trap heat. For example, one ton of emissions of CO_2 has a different effect than one ton of emissions of methane. To compare emissions of different greenhouse gases, a weighting factor called a Global Warming Potential (GWP) is often used. To use a GWP, the heat-trapping ability of one metric ton (1,000 kilograms) of CO_2 is taken as the standard, and emissions are expressed in terms of CO_2 equivalent, but can also be expressed in terms of carbon equivalent.

7. National Ambient Air Quality Standards (NAAQS) Attainment Status

Section 107 of the 1977 Clean Air Act Amendment requires that EPA publish a list of all geographic areas in compliance with the NAAQS, as well as those areas not in attainment of the NAAQS. The designation of an area is made on a pollutant-by-pollutant basis. Descriptions of EPA's area designations are shown in **Table 2.**

TABLE 2
ATTAINMENT CLASSIFICATIONS AND DEFINITIONS

Attainment	Unclassified	Maintenance	Nonattainment
Area is in compliance with the NAAQS.	Area has insufficient data to make a determination and is treated as being in attainment.	Area once classified as nonattainment but has since demonstrated attainment of the NAAQS.	Area is not in compliance with the NAAQS.

Ambient air quality is monitored through a network of stations to determine conditions throughout the country. EPA reviews the monitoring data, and areas where air pollution levels persistently exceed the NAAQS may be designated "nonattainment" for one or more pollutants. After a nonattainment area improves conditions to meet the standard for a pollutant, it is redesignated as a maintenance area. Typically these designations are applied to entire counties or groups of counties.

The MD22 project is located in Harford County, Maryland, which is included as a part of the Baltimore Metropolitan Statistical Area (MSA). The region has been classified as moderate nonattainment with respect to the eight-hour ozone standard and nonattainment of the 1997 fine particulate ($PM_{2.5}$) standard. A portion of the MSA, the Baltimore Central Business District (CBD), had been non-attainment for carbon monoxide; however, this area has been re-designated as a CO Maintenance Area. This CO Maintenance Area is only the Baltimore CBD and does not extend to Harford County.

When a region is designated a nonattainment, it must develop a plan for meeting the appropriate standard. The Plan, called the State Implementation Plan (SIP), is submitted to EPA for approval. Similarly, after meeting the standard, the region must develop a Maintenance SIP to demonstrate that it will continue to meet the criteria. Transportation programs and plans must be evaluated for "conformity" to the applicable SIP provisions before projects can receive Federal funding. A Transportation Improvement Program (TIP) generally presents projects anticipated over the next several years while a Long Range Plan (LRP) covers a longer period. A Metropolitan Planning Organization (MPO) is designated to develop the TIP and LRP for a region, and to document their conformity with SIP provisions. For the Baltimore region, the Baltimore Regional Transportation Board (BRTB), which is part of the Baltimore Metropolitan Council (BMC), serves as the MPO. Harford County is a member of the BMC.

The Maryland Department of the Environment (MDE) submitted a SIP for the Baltimore ozone nonattainment area in June 2007. In January 2009, EPA deemed the mobile RFP budgets "adequate". The ozone SIP anticipates continued reductions in the precursor emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx). On August 24, 2011 MDE submitted Maryland's State Implementation Plan (SIP) Revision developed for the purpose of meeting the Reasonably Available Control Technology (RACT) requirements set forth by the Clean Air Act (CAA), as the requirements apply to the 0.08 ppm 8-hour ozone National Ambient Air Quality Standard (NAAQS). This document was a revised and updated copy of the RACT SIP that Maryland submitted, in 2006, for the entire state. With this document Maryland has certified that it meets the CAA RACT requirements for Maryland major sources for the 8-hour ozone standard.

Regarding $PM_{2.5}$, EPA required a plan by April 2008 that would demonstrate attainment by April 2010. A SIP for the $PM_{2.5}$ nonattainment area was submitted by MDE in March 2008 indicating compliance with the 1997 standards by 2009. In October 2008, EPA acknowledged that the SIP submission was complete and within the regulatory deadline. The plan also included contingency measures required for failure to attain, which consisted of a contingency plan containing adopted measures that qualify as contingency measures for the Attainment Demonstration.

As the MPO, BRTB develops the TIP and LRP the region, including Harford County. Furthermore, it performs the related conformity analysis. The current LRP, referred to as the *Long Range Metropolitan Transportation Plan: Plan It 2035* was adopted by BRTB on November 14, 2011. The latest TIP, covering the period 2012 to 2015, was adopted by BRTB on November 14, 2011. An updated conformity analysis covering both the TIP and LRP was also adopted in on November 14, 2011.

At a regional level, a project is considered to be conforming if it is a part of a conforming TIP and LRP. The proposed project was listed as an "Exempt" Project in the November 14, 2011 Conformity Determination of *Plan It 2035* and *the 2012-2015 Transportation Improvement Program* as Project ID: 65-0804-39, with an anticipated year of operation of 2013. The project scope in the TIP included the design and construction of intersection improvements and the provision of bicycle and pedestrian facilities. By Resolution #13-1 an Amendment to the TIP was proposed due a revision of MD 22 project scope and a request for additional funds. In part, this resolution stated:

*"The **BRAC Related Intersections near APG project** has been determined by the ICG to be non-exempt from the requirement to determine conformity, through review of the Transportation Conformity Rule (§93.126 and §93.127). This project will provide additional capacity to the transportation network. The Interagency Consultation Group (ICG) consisting of representation from the MPO, and Maryland Departments of Transportation and Environment provided direction for how to move forward with the conformity determination. A conformity determination ensures that the implementation of the project in the **amended FY 2012-2015 Transportation Improvement Program** does not worsen the region's air quality or delay the timely attainment of national ambient air quality standards.*

In order to determine conformity to air quality improvement objectives delineated in the state air quality plan, a regional emissions analysis was performed. The projected emissions from the regional transportation network, considering the combined effect of this project together with the conforming long range

transportation plan (Plan It 2035) and the 2012-2015 TIP, do not cause the Plan or TIP to exceed the SIP mobile source emission budgets. The results indicate that mobile source emissions associated with the implementation of projects contained in the amended TIP and Plan It 2035 meet the interim emissions test and are below established mobile source budgets for all affected horizon years. ***Implementation of this project will not worsen the region's air quality or delay the timely attainment of national air quality standards or interfere with implementation of any transportation control measures (TCMs).”***

Amendment 13-1 was discussed at the BMC Interagency Consultation Group Meeting on July 18, 2012, and was approved by the ICG. After a public review, the Amendment was approved by the BRTB on July 31, 2012. Resolution 13-1 is included in Appendix D

8. Ambient Air Quality in the Study Area

a. Local Meteorology

The nature of the surrounding atmosphere is an important element in assessing the ambient air quality of an area. Located on the Mid-Atlantic coast, Harford County, Maryland sits adjacent to the Chesapeake Bay. The area is protected from harsh weather variations year-round by the bay and the Atlantic Ocean to the east, and the Appalachian Mountains to the west.

Since the region is near the average path of the low-pressure systems that move across the country, changes in wind direction are frequent and contribute to the changeable character of the weather. Rainfall distribution throughout the year is rather uniform; however, the greatest intensities are confined to the summer and early fall months, the season for hurricanes and thunderstorm activity. Precipitation in the study area averages at 44.2 inches annually (www.usclimatedata.com).

In summer, the area is under the influence of the large semi-permanent high-pressure system commonly known as the Bermuda High and centered over the Atlantic Ocean. This pressure system brings warm humid air to the area. The proximity of large water areas and the inflow of southerly winds contribute to high relative humidity during much of the year. January is the coldest month, and July, the warmest. Snowfall occurs on about twelve days per year on the average. Snow is can be mixed with rain and sleet, and snow seldom remains on the ground for more than a few days. Glaze or freezing rain occurs generally in January or February. Freezing temperatures generally do not occur after mid-April or before the end of October.

The annual prevailing wind direction is from the west. Winter and spring months have the highest average wind speed. Destructive velocities are rare and occur mostly during summer thunderstorms. Only rarely have hurricanes in the vicinity caused widespread damage, then primarily through flooding. There have been fourteen hurricanes (1933, 1935, 1944, 1954, 1955, 1972, 1975, 1979, 1985, 1996, 1999, 2003, 2004, 2011) in Maryland over the past 100 years.

b. Monitored Air Quality

The Division of Air Quality, within the Maryland Department of the Environment is responsible for implementing and enforcing regulations to ensure that the air that Maryland citizens breathe is clean and healthful. This mission is accomplished through several methods, including air pollution monitoring.

The closest MDE air monitoring station for the study area is located at 600 Dorsey Road in Essex, Maryland. In addition, monitoring data is available at Delaware DNREC (Delaware Department of Natural Resources and Environmental Control) monitoring stations near Wilmington, Delaware and Newark, Delaware. All sites are in EPA Region 3. Monitored air quality data within or near the study area for the years 2009-2011 is presented in **Table 3**. Further monitoring information is located in Appendix A.

TABLE 3
Ambient Air Quality Data 2009-2011

			Site 240053001 600 Dorsey Road, Essex MD			Site 100032004 MLK Blvd, Wilmington DE			100031007 Lums Pond State Park, DE		
			2009	*2010*	*2011*	*2009*	*2010*	*2011*	*2009*	*2010*	*2011*
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum	7.6	3.0	2.3	2.8	1.4	1.7	-	-	-
		2nd Maximum	5.8	2.7	2.3	2.1	1.4	1.7	-	-	-
		# of Exceedances	0	0	0	0	0	0	-	-	-
	8-Hour	Maximum	2.9	2.2	1.7	1.4	1.3	1.5	-	-	-
		2nd Maximum	1.9	1.9	1.6	1.3	1.2	1.1	-	-	-
		# of Exceedances	0	0	0	0	0	0	-	-	-
Particulate Matter [ug/m^3]	$PM_{2.5}$	98th Pct. 24-Hour	31	29	26	31	26	25	21	28	21
		# of Exceedances	0	0	0	0	0	0	0	0	0
		Mean Annual	11	11.5	10.7	11.9	11.3	10.3	10.0	10.0	8.8
		# of Exceedances	0	0	0	0	0	0	0	0	0
Ozone (O_3) [ppm]	1-Hour	First Highest	.104	.128	112	-	-	-	.092	.098	.095
		Second Highest	.099	.112	.109	-	-	-	.085	.094	.095
		Third Highest	.090	.103	.106	-	-	-	.083	.093	.094
		Fourth Highest	.085	.100	.103	-	-	-	.078	.090	.092
		# of Exceedances	0	1	0	-	-	-	0	0	0
	8-Hour	First Highest	.086	.115	.101	-	-	-	.078	.086	.082
		Second Highest	.074	.090	.091	-	-	-	.077	.085	.079
		Third Highest	.071	.087	.087	-	-	-	.068	.080	.078
		Fourth Highest	.071	.084	.085	-	-	-	.068	.080	.078
		# of Days Standard Exceeded	1	15	12	-	-	-	2	6	7

TABLE 3 (CONTINUED)
Ambient Air Quality Data 2009-2011

			Site 240053001 600 Dorsey Road, Essex MD			Site 100032004 MLK Blvd, Wilmington DE			100031007 Lums Pond State Park, DE		
			2009	*2010*	*2011*	*2009*	*2010*	*2011*	*2009*	*2010*	*2011*
Nitrogen Dioxide (NO_2) [ppb]		1-Hour 1st Maximum	60	65	55	68	67	53	-	-	-
		1-Hour 2nd Maximum	55	58	51	62	64	47	-	-	-
		98th Percentile	50	54	47	54	50	45	-	-	-
		# of Days Standard Exceeded	0	0	0	0	0	0	-	-	-
Sulfur Dioxide (SO_2) [ppb]		1-Hour 1st Maximum	56	33	53	32	35	28	-	-	-
		1-Hour 2ndMaximum	55	22	44	30	54	19	-	-	-
		24-Hour 1st Maximum	33	9	11	11	14	6	-	-	-
		24-Hour 2nd Maximum	16	7	10	10	14	5	-	-	-
		# of Days Standard Exceeded	0	0	0	0	0	0	-	-	-

B. ENVIRONMENTAL CONSEQUENCES

1. Introduction

In addition to the regional conformity analysis, any Federally funded project within a nonattainment or maintenance area for carbon monoxide or particulate matter must be analyzed at the project-level. These pollutants can have localized ("hot-spot") levels above the criteria. To satisfy the NEPA air quality assessment purpose, it has been common to analyze project-level CO conditions. Although Harford County is not a nonattainment area or maintenance area subject to the requirements of 40 CFR 93.116 concerning CO conformity determination, a qualitative CO assessment has nonetheless been included. Also, since Harford County is a nonattainment area for $PM_{2.5}$, a project-specific $PM_{2.5}$ assessment has also been provided.

2. Carbon Monoxide (CO) Assessment

A portion of the Baltimore Metropolitan Statistical Area (MSA) is considered to be a maintenance area in terms of carbon monoxide (CO). This maintenance area only encompasses the Central Business District of Baltimore City, which previously had been in nonattainment. Harford County is not included in the Baltimore maintenance area, and therefore in not a nonattainment or a maintenance area. There has not been a local violation of the standard since 1988. Code of Federal Regulations Title 40, Part 93-Subpart A (40 CFR 93A) implements section 176(c) of the Clean Air Act (CAA), as amended (42 U.S.C. 7401 *et seq.),* and the related requirements of 23 U.S.C. 109(j), with respect to the conformity of transportation plans, programs, and projects which are developed, funded, or approved by the United States Department of Transportation (DOT), and by metropolitan planning organizations (MPOs) or other recipients of funds under title 23 U.S.C. or the Federal Transit Laws (49 U.S.C. Chapter 53). Paragraph 40 CFR 93.102 (b): *Geographic Applicability* states that the provisions of the subpart apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. Since the study area is not in a CO nonattainment or maintenance area, a hot-spot conformity determination in conformance with 40 CFR 93.116 is not required, and a qualitative assessment considering of local factors is provided hereinafter.

A review of data provided, including traffic data shown in Appendix B as summarized in Table 4, demonstrates that the improvements to MD 22 will not result in significant traffic volumes, or changes in vehicle mix or other factors that would cause an increase in emissions relative to the No-build conditions. Data in Table 4 also shows that the intersection LOS will be improved from D/D (AM/PM) for the No-build condition to C/C for the Build condition.

As shown in Table 3, the maximum 2011 1-hour monitored CO concentrations is 2.3 ppm at MDE site 240053001, located at 600 Dorsey Road in Essex Maryland. This concentration is only 6.6 percent of the 1-hour CO NAAQS of 35.0 ppm. The maximum 2011 8-hour monitored CO concentration is 1.7 ppm at this same site, which is only 19 percent of the 8-hour NAAQS of 9.0 ppm.

In conclusion, improvements to MD 22 at Beards Hill Road and at MD 462 will not cause or contribute to a new violation of the CO NAAQS. The monitored data in Table 3 demonstrates a steady decrease in monitored CO concentrations. This decrease in monitored concentrations is expected to continue as vehicle emission control technology and fuel efficiency continues to improve as older vehicles are retired.

TABLE 4 TRAFFIC DATA

TABLE 4a: NO-BUILD

	Existing 2012	No-build 2015	No-build 2030
ADT volumes	22,800	43,910	46,771
Percent Trucks Total/Diesel	8% / 5.60%	8% / 5.59%	8% / 5.59%
Daily Truck Volumes (ADTT)	1,824 / 1,277	3,513 / 2,455	3,742 / 2,615
Worse Case LOS AM/PM	B/B	D/D	D/D

TABLE 4b: BUILD

	Existing 2012	Build 2015	Build 2030
ADT volumes	22,800	43,910	46,771
Percent Trucks Total/Diesel	8% / 5.60%	8% / 5.59%	8% / 5.59%
Daily Truck Volumes (ADTT)	1,824 / 1,277	3,513 / 2,455	3,742 / 2,615
Worse Case LOS AM/PM	B/B	C/C	C/C

3. Particulate Matter ($PM_{2.5}$)

The project is located in Harford County, which is in the Baltimore, MD Fine Particulate Matter ($PM_{2.5}$) nonattainment area. This area was designated as nonattainment for $PM_{2.5}$ on January 5, 2005 by EPA. This designation became effective on April 5, 2005, 90 days after EPA's published action in the Federal Register. Transportation conformity for the $PM_{2.5}$ standards applied on April 5, 2006, after the one-year grace period provided by the Clean Air Act. On November 13, 2009 EPA designated nonattainment areas based on the 2006 24-hour $PM_{2.5}$ NAAQS. The Baltimore region was not designated as nonattainment for the 2006 standard, therefore the designations based on the 1997 NAAQS remain in effect.

On March 10, 2006, EPA issued amendments to the Transportation Conformity Rule to address localized impacts of particulate matter: "*PM2.5 and PM10 Hot-Spot Analyses in Project-level Transportation Conformity Determinations for the New $PM_{2.5}$ and Existing PM_{10} National Ambient Air Quality Standards*" (71

FR 12468). These rule amendments require the assessment of localized air quality impacts of Federally funded or approved transportation projects in PM_{10} and $PM_{2.5}$ nonattainment and maintenance areas.

On December 20, 2010, EPA issued "*Final Transportation Conformity Guidance for Quantitative Hot- spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas*", (75 FR 79370), which will help state and local agencies complete quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses for project-level transportation conformity determinations of certain highway and transit projects. This guidance describes transportation conformity requirements for hot-spot analyses, and provides technical guidance on estimating project emissions with the Environmental Protection Agency's (EPA's) MOVES model, California's EMFAC model, and other methods. This guidance includes a two-year grace period until December 20, 2012, and therefore, a quantitative analysis is not being provided for this project.

Projects that require hotspot analysis for $PM_{2.5}$ are those that are *Projects of Air Quality Concern* as enumerated in 40 CFR 93.123(b)(1):

(i) New highway projects that have a significant number of diesel vehicles, and expanded 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;
(iii) New bus and rail terminals and transfer points that significantly increase the 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 PM_{10} or $PM_{2.5}$ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violations.

As provided in the above referenced guidance, examples of projects that are of air quality concern and, therefore, covered by 40 CFR 93.123(b)(1)(i) and (ii) include the following:

- A project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT) where 8 percent or more of such AADT is diesel truck traffic;
- New exit ramps and other highway facility improvements to connect a highway or expressway to a major freight, bus, or intermodal terminal;
- Expansion of an existing highway or other facility that affects a congested intersection (operated at LOS D, E, or F) that has a significant increase in the number of diesel trucks; and
- Similar highway projects that involve a significant increase in the number of diesel transit buses and/or diesel trucks

The above AADT's and truck percentages are not to be considered "thresholds", but should be used as general guidance for on whether the number of trucks is to be considered as significance. Determination of "significance" will be completed through Interagency Consultation procedures.

As discussed in the examples of the preamble to the March 10, 2006 Final Rule for $PM_{2.5}$ and PM_{10} Hot-Spot Analyses in Project-Level Transportation Conformity Determinations (71 FR 12491), for projects involving the expansion of an existing highway, 40 CFR 93.123(b)(1)(i) has been interpreted as applying only to projects that would involve a significant increase in the number of diesel transit buses and diesel trucks on the existing facility.

4. $PM_{2.5}$ Conformity Determination

As discussed above, determination as to whether the project is a *Project of Air Quality Concern* will be finalized by Interagency Consultation. To assist with the Interagency Consultation, SHA has prepared the following assessment of the proposed improvements:

- The MD 22 Project is considered under the following paragraphs of 40 CFR 93
  - 40 CFR 92.123(b)(1)(i), as amended, which includes *"New highway projects that have a significant number of diesel vehicles, and expanded projects that have a significant increase in the number of diesel vehicles."*
  - 40 CFR 92.123(b)(1)(ii), as amended, which includes "*Projects affecting intersections that are at LOS D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles"*

- The proposed improvements do not meet the criteria set forth in 40 CFR 93.123(b)(1)(i) to be considered a project of "air quality concern" based on the following considerations:
  - The proposed improvement for MD 22 involves adding a third through lane to MD 22 in both the eastbound and westbound directions by widening to the outside from east of I-95 to east of MD 462. An additional left turn lane from MD 22 eastbound to Beards Hill Road northbound will be added. Single left turn lanes will be maintained from MD 22 eastbound to MD 462 northbound and from MD 22 westbound to MD 462 southbound. A lengthened right turn lane on MD 22 is proposed from MD 22 westbound to MD 462 northbound.

  - As shown in Table 4, MD 22 does not carry a significant number of diesel vehicles; nor will there be a significant increase in diesel vehicles. For both the No-build and Build conditions, the 2015 ADT volumes are 43,900 and the average daily number of diesel trucks is 2,455. In 2030 for both the No-build and Build conditions, the ADT volumes are 46,771 and the average daily number of diesel trucks is 2,615.

  - The proposed improvements are not anticipated to add any additional daily traffic over no-build conditions. The Build Alternative would serve the same demand with safer operational characteristics and less congestion in the peak hours. As discussed above, the discussed construction will not result in any changes between No-Build and Build traffic volumes, vehicle mix, or location of the existing facility. A review of the traffic data demonstrates that there will not be a "significant" increase in the number of trucks from the No-Build condition to the Build. The projected 2030 No-Build ADT represents the unconstrained user demand. This demand will not change under a Build scenario, assuming that the real demand includes traffic that has previously shifted to alternate routes in the network due to congestion and returns with the availability of additional capacity. Depicted truck percentages represent the amount of light, medium and heavy truck activity along a given roadway segment. Unless predicated by significant land use changes (heavy truck generators), existing truck percentages are used as the primary factor in determining future percentages. The Build condition will improve operation of the roadway and intersections, relieving system congestion, but will not necessarily inducing new truck traffic origin-destination patterns.

- The proposed improvements to MD 22 the neards Hill Road intersection and MD 462 intersection also do not meet the criteria set forth in 40 CFR 93.123(b)(1)(ii) to be considered a project of "air

quality concern". The intersections do not change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles; in fact the LOS of the intersections improve due to the construction of the proposed improvements. The MD 22 intersections will improve from LOS D/D (AM/PM) to C/C due to proposed improvements.

- Section 176(c) of the Clean Air Act and the Federal Conformity Rule require that transportation plans and programs conform to the intent of the air quality state implementation plan (SIP) through a regional emissions analysis in $PM_{2.5}$ nonattainment areas. The Baltimore Regional Transportation Board (BRTB) serves as the Metropolitan Planning Organization (MPO), and therefore it is responsible for the regional conformity determination.

- The currently approved BRTB Long Range Metropolitan Transportation Plan (LRP), referred to as *Plan It 2035*, and the *2012-2015 Transportation Improvement Program* (TIP), including TIP Amendment 13-1, have been determined to conform to the requirements of the Clean Air Act Amendments of 1990. These represent the currently conforming LRP and TIP in accordance with 40 CFR 93.114. MD 22 is included in Conformity Determination of Plan It 2035 and the 2012-2015 Transportation Improvement Program as Project ID: 65-0804-39, with an anticipated year of operation of 2013.

- The current conformity determination is consistent with the final conformity rule found in 40 CFR Parts 51 and 93. Conformity to the requirements of the Clean Air Act Amendments of 1990 means that the transportation activity will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant NAAQS.

- Based on review and analysis as discussed above, it is determined that the proposed improvements of MD 22 from east of I-95 to east of MD 462 in Harford County will meet the Clean Air Act and 40 CFR 93.109 requirements for Fine Particulate Matter – $PM_{2.5}$. These requirements are met without a hot-spot analysis because the project has not been found to be a project of air quality concern as defined under 40 CFR 93.123(b)(1). The project will not cause or contribute to a new violation of the $PM_{2.5}$ NAAQS, or increase the frequency or severity of an existing violation.

5. MSAT Assessment

The Federal Highway Administration (FHWA) *Guidance on Air Toxic Analysis in NEPA Documents*[1] requires analysis of Mobile Source Air Toxics (MSAT) under specific conditions. The EPA has designated six prioritized MSATs, which are known or probable carcinogens or can cause chronic respiratory effects. The six prioritized MSATs are: benzene; acrolein; formaldehyde; 1,3-butadiene, acetaldehyde; and diesel exhaust (diesel exhaust gases and diesel particulate matter). The 2030 ADT will be 46,771, which is less than 140,000. Therefore in accordance with the above referenced guidance, the US 29 Widening Project would be a "*minor widening project[s] and new interchange[s], such as those that replace(s) a signalized intersection on a surface street*" … "*that serves to improve operations of highway…..without adding substantial new capacity or creating a facility that is likely to meaningfully increase emissions*"[2]. Therefore, the MD 22 improvements would be considered a **Project with Low Potential MSAT Effects**.

[1] Interim Guidance on Air Toxic Analysis in NEPA Documents
[2] ibid

a. Project Specific MSAT Information

The proposed roadway will have the effect of moving some traffic closer to nearby buildings and businesses; therefore, there may be localized areas where ambient concentrations of MSATs could be higher under Build Alternative than the No-Build Alternative. Although the magnitude and the duration of these potential increases cannot be accurately quantified due to the inherent deficiencies of current models, based on the traffic volumes (ADT) and truck percentages, the MD 22 improvements will not result in any meaningful changes in traffic volumes, vehicle mix, or any other factor that would cause a significant increase in emissions impacts. As such, this project will generate minimal air quality impacts for the Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. In addition, emissions would likely be lower in the design year than present levels as a result of EPA's national control programs that are projected to reduce MSAT emissions by 33 to 94 percent between 1999 and 2050 (see **Table 5**). 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 nearly all cases.

TABLE 5

NATIONAL MSAT EMISSION TRENDS 1999 - 2050 FOR VEHICLES OPERATING ON ROADWAYS USING EPA's MOBILE6.2 MODEL

Pollutant/VMT	Pollutant Emissions (tons) and Vehicle-Miles Traveled (VMT) by Calendar Year												Reduction
	1999	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050	1999 to 2050
Acrolein	2570	2430	1500	1000	814	775	783	824	889	970	1060	1160	-55%
Benzene	102000	98400	66700	38000	29200	27000	27200	28700	31000	33900	37000	40500	-60%
1,3-Butadiene	14400	13800	8620	5410	4640	4360	4390	4630	5010	5460	5970	6520	-55%
Diesel PM	139000	128000	91900	50000	22100	11400	8240	7080	6480	7070	7720	8440	-94%
Formaldehyde	50900	48800	30300	21400	18700	17800	18100	19000	20500	22400	24500	26800	-47%
Naphthalene	4150	4030	2610	1990	1770	1780	1890	2030	2200	2400	2620	2870	-31%
Polycyclic Organic Matter	561	541	343	259	231	233	246	265	286	313	341	373	-33%
Trillions VMT	2.69	2.75	2.94	3.24	3.55	3.88	4.24	4.63	5.05	5.51	6.02	6.58	145%

Source: EPA

b. Unavailable or Incomplete Information

Available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with the Build Alternative. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information.

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling to estimate ambient concentrations resulting from the estimated emissions, exposure modeling to estimate human exposure to the estimated concentrations, and then a 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.

- **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

MOBILE6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE6.2 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 MOBILE6.2 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, MOBILE6.2 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 MOBILE6.2 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 the capability of MOBILE6.2 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. (Note: Although the emission model MOVES is capable of determining some MSAT emissions, it has not yet been verified for this use.)

- **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 recently finished research on best practices in applying models and other technical methods in the analysis of MSATs. This work focuses on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Analysis recommendations based on this research have not yet been issued by EPA. 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.
- **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. Considerable uncertainties are also 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 among the 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.

c. 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, a variety of studies 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.

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 problems[3]. Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, the studies do not provide information that would be useful to alleviate the uncertainties listed above and enable us to perform a more comprehensive evaluation of the health impacts specific to this project.

d. Relevance of Unavailable or Incomplete Information

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 us to reasonably predict relative emissions changes among alternatives for larger projects, the amount of MSAT emissions from each of the project alternatives and MSAT concentrations or exposures created by each of the project alternatives 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 any of the alternatives would have significant adverse impacts on the human environment.

e. Sensitive Receptor Assessment

As discussed above, there may be localized areas where ambient concentrations of MSAT are slightly higher in any build scenario than in the no build scenario. Dispersion studies have shown that air toxics from the roadway start to drop off at about 100 meters. By 500 meters, most studies have found it very difficult to distinguish the roadway air toxic concentrations from background air toxic concentrations in any given area. Sensitive receptors include those facilities most likely to contain large concentrations of the more sensitive population (hospitals, schools, licensed day cares, and elder care facilities). An assessment of potential sensitive receptors within both 100 and 500 meters reveals that there are no

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

sensitive receptors within 100 meters of MD 22, and there is one sensitive receptor within 500 meters of MD 22 as shown in **Table 6** and on **Figure 3**.

Table 6
MSAT Sensitive Receptor

Figure No.	Name	Address	City	Zip Code
3	Center for Educational Opportunity	253 Paradise Road (MD 462)	Aberdeen, MD	21001

Figure 3 – Center for Educational Opportunity

f. Summary

In summary, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No-Build Alternatives, but this could be offset due to increases in speeds and reductions in congestion (which are associated with

lower MSAT emissions). Also, MSATs will be lower in other locations when traffic shifts away from them. Furthermore, both at the project location and regionally, MSAT concentrations will decease in future years due to EPA's vehicle emission and fuel regulations. It has been shown that as a result of EPA's national emissions control programs MSAT emissions are projected to be reduced by 57 to 87 percent between 2000 and 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 nearly all cases.

6. Greenhouse Gas Assessment

a. NEPA Requirements

From a NEPA perspective, it is analytically problematic to conduct a project level cumulative effects analysis of greenhouse gas emissions on a global-scale problem. Secondly, criteria pollutant emissions last in the atmosphere for perhaps months; CO_2 emissions remain in the atmosphere far longer - over 100 years - and therefore require a much more sustained, intergenerational effort. Finally, due to the interactions between elements of the transportation system as a whole, project-level emissions analyses would be less informative than ones conducted at regional, state, or national levels. Because of these concerns, FHWA concludes that the CO_2 emissions cannot be usefully evaluated in the same way that other vehicle emissions are addressed.

The NEPA process is meant to concentrate on the analyses of issues that can be truly meaningful to the consideration of project alternatives, rather than simply amassing data. In the absence of a regional or national framework for considering the implications of a project level GHG analysis such a detailed analysis would not inform project decision-making, while adding administrative burden. However, it can be stated that estimates of CO_2 emissions, a primary factor in greenhouse gases, are based on the amount of direct energy required. The direct energy values represent the energy required for vehicle propulsion. This energy is a function of traffic characteristics such as volume, speed, distance traveled, vehicle mix, and thermal value of the fuel being used. A review of traffic data for the project reveals that, because there will not be a significant change in traffic volumes from the No-build to Build conditions, CO_2 emission burdens will most likely result in almost no change as compared to the existing conditions.

b. Greenhouse Gas Emission Reduction Act of 2009 (GGRA)

In 2009, Maryland Governor Martin O'Malley and the Maryland General Assembly passed the Greenhouse Gas Emission Reduction Act of 2009 (GGRA). The law requires the State to develop and implement a Plan (the GGRA Plan or the Plan) to reduce greenhouse gas (GHG) emissions 25 percent from a 2006 baseline by 2020. The Draft Plan in response to the GGRA was published on December 31, 2011. The Draft Plan puts the State on track to achieve the 25 percent GHG reduction required by the law while also creating jobs and improving Maryland's economy. The Plan also will help with other environmental priorities, including restoration of the Chesapeake Bay, improving air quality and other critical energy and national security issues. The Final Plan will be published prior to December 31, 2012.

The Draft plan includes a program called ***Transportation – 13: Evaluate the GHG Emissions Impacts from Major New Projects and Plans***. This program focuses on the process of evaluating GHG emissions from all major State and local projects. The goals of this program are to understand how new, major projects may affect the State's ability to achieve a 25% reduction in GHG emissions by 2020 and to develop guidance for the State and other major project sponsors to use in evaluating the impacts of new projects. MDOT identified three potential strategies under this program:

- Active participation in framing national GHG emissions evaluation policy;
- Evaluation of GHG emissions for major projects through the NEPA process;

- Evaluation of GHG Emissions through State-wide/regional planning efforts including an effort that will link to, but be separate from, the transportation conformity process and establishes voluntary out-year emission targets for GHGs for the Baltimore and Washington regions.

Maryland also is considering a program that would insure that both short and long-term GHG emissions reduction goals are considered in state and local land-use and transportation planning processes.

A process for evaluating GHG emission impacts of new major projects is currently under development at the national level and will inform the planning process at the State level.

7. Construction Impacts

The construction phase of the proposed project has the potential to impact the local ambient air quality by generating fugitive dust through activities such as demolition and materials handling. The State Highway Administration has addressed this possibility by establishing "Specifications for Construction and Materials" which specifies procedures to be followed by contractors involved in site work.

The Maryland Air and Radiation Management Administration was consulted to determine the adequacy of the "Specifications" in terms of satisfying the requirements of the "Regulations Governing the Control of Air Pollution in the State of Maryland". The Maryland Air and Radiation Management Administration found the specifications to be consistent with the requirements of these regulations. Therefore, during the construction period, all appropriate measures (Code of Maryland Regulations 10.18.06.03 D) would be incorporated to minimize the impact of the proposed transportation improvements on the air quality of the area.

Specifically, applying water or appropriate liquids during demolition, land clearing, grading, and construction operations can minimize fugitive dust. At all times when in motion, open-body trucks for transporting materials should be covered, and all excavated material should be removed promptly.

Mobile source emissions can be minimized during construction by not permitting idling delivery trucks or other equipment during periods of unloading or other non-active use. The existing number of traffic lanes should be maintained, to the maximum extent possible, and construction schedules should be planned in a manner that will not create traffic disruption and increase air pollutants. Application of these measures will ensure that construction impact of the project is insignificant.

8. Agency Coordination/Interagency Consultation

Copies of this air quality analysis were circulated to the Federal Highway Administration (FHWA), the U.S. Environmental Protection Agency (US EPA), the Maryland Department of the Environment (MDE), and the BMC for Interagency Consultation review and comment. Approval was received by email from FHWA and BMC. In addition, the report was discussed at the BMC Interagency Consultation Group (ICG) meeting on July 18, 2012. All in attendance (FHWA, EPA, MDE and BMC) agreed with the analysis, and that the MD 22 project was not a project of air quality concern. Refer to Appendix D for emails and other data.

III. CONCLUSIONS

The purpose of the project focuses on meeting the current and future regional transportation needs of the area. The project is not predicted to cause or exacerbate a violation of the NAAQS. The project is not expected to measurably increase regional emission burdens or MSAT levels. The project is also not expected to cause a violation of the $PM_{2.5}$ standard. There will not be significant increases in Greenhouse Gases. Construction-related effects of the project would be limited to short-term increased fugitive dust and mobile-source emissions during construction. State and local regulations regarding dust control and other air quality emission reduction controls should be followed.

APPENDIX A

MONITORED AIR QUALITY DATA:

MARYLAND

Monitor Values Report

Geographic Area: Maryland
Pollutant: CO
Year: 2009
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	7824	7.6	5.8	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	7967	0.3	0.3	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
1 HOUR	8452	1.1	1.1	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
1 HOUR	8595	3	2.8	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: CO
Year: 2009
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG END HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG END HOUR	7816	2.9	1.9	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
8-HR RUN AVG END HOUR	8028	0.4	0.3	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
8-HR RUN AVG END HOUR	8539	0.9	0.9	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
8-HR RUN AVG END HOUR	8599	2.1	1.8	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: CO
Year: 2010
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8096	3	2.7	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	4500	0.4	0.4	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
1 HOUR	8107	1.5	1.3	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
1 HOUR	7781	2.1	1.9	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: CO
Year: 2010
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG END HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG END HOUR	8107	2.2	1.9	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
8-HR RUN AVG END HOUR	4564	0.4	0.4	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
8-HR RUN AVG END HOUR	8103	1	1	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
8-HR RUN AVG END HOUR	7818	1.5	1.4	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: CO
Year: 2011
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8230	2.3	2.3	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	8343	0.4	0.4	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
1 HOUR	8183	1.7	1.3	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
1 HOUR	8533	2.3	2.2	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: CO
Year: 2011
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG END HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG END HOUR	8224	1.7	1.6	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
8-HR RUN AVG END HOUR	8430	0.4	0.3	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
8-HR RUN AVG END HOUR	8145	1.1	0.8	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
8-HR RUN AVG END HOUR	8548	1.8	1.5	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: NO2
Year: 2009
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	98th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	7929	60	55	50	0	None	2	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	8479	72	72	59	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: NO2
Year: 2010
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	98th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8194	65	58	54	0	None	2	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	8085	72	69	61	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: NO2
Year: 2011
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	98th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8201	55	51	47	0	None	2	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	7956	58	57	54	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2009
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	5026	0.09	0.089	0.083	0.08	0	0.00	214	207	97	3	None	1	240030014	Davidsonville Recreation Center, 3801 Queen Anne Bridge Road	Not in a city	Anne Arundel	MD	03
1 HOUR	5117	0.09	0.085	0.084	0.083	0	0.00	214	214	100	0	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
1 HOUR	8431	0.104	0.099	0.09	0.085	0	0.00	214	200	93	3	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	4946	0.095	0.079	0.078	0.076	0	0.00	214	205	96	1	None	1	240090011	350 Stafford Road	Not in a city	Calvert	MD	03
1 HOUR	5097	0.088	0.083	0.076	0.075	0	0.00	214	212	99	2	None	1	240130001	1300 W. Old Liberty Road	Not in a city	Carroll	MD	03
1 HOUR	4955	0.097	0.095	0.093	0.085	0	0.00	214	205	96	5	None	1	240150003	4600 Telegraph Road	Not in a city	Cecil	MD	03
1 HOUR	5111	0.086	0.078	0.078	0.073	0	0.00	214	214	100	0	None	1	240170010	Oaks Road	Hughesville	Charles	MD	03
1 HOUR	5056	0.083	0.082	0.081	0.077	0	0.00	214	208	97	3	None	1	240210037	Frederick County Airport ,180 E Airport Drive	Frederick	Frederick	MD	03
1 HOUR	8653	0.076	0.073	0.073	0.072	0	0.00	214	212	99	2	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
1 HOUR	5015	0.133	0.123	0.119	0.098	1	1.00	214	208	97	3	None	1	240251001	Edgewood Chemical Biological Center (Apg), Waehli Road	Edgewood	Harford	MD	03
1 HOUR	5102	0.112	0.091	0.09	0.086	0	0.00	214	213	100	1	None	1	240259001	3560 Aldino Road	Not in a city	Harford	MD	03
1 HOUR	5008	0.083	0.081	0.078	0.076	0	0.00	214	208	97	2	None	1	240290002	Millington Wildlife Management Area, Massey - Maryland Line Road (Route 330)	Millington	Kent	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2009
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	5057	0.087	0.084	0.084	0.08	0	0.00	214	212	99	2	None	1	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Rockville	Montgomery	MD	03
1 HOUR	8150	0.091	0.091	0.084	0.08	0	0.00	214	191	89	2	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
1 HOUR	5121	0.089	0.088	0.078	0.077	0	0.00	214	214	100	0	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
1 HOUR	5114	0.074	0.074	0.074	0.072	0	0.00	214	212	99	2	None	1	240430009	18530 Roxbury Road	Hagerstown	Washington	MD	03
1 HOUR	3704	0.072	0.071	0.069	0.069	0	0.00	214	154	72	0	None	1	240471001	Assateague Island National Seashore	Not in a city	Worcester	MD	03
1 HOUR	4761	0.089	0.082	0.08	0.079	0	0.00	214	198	93	0	None	1	245100054	Furley E.S. Recreational Center, 4633 Furley Avenue.	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2009
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	5013	0.075	0.071	0.071	0.07	0	0.00	214	204	95	0	None	1	240030014	Davidsonville Recreation Center, 3801 Queen Anne Bridge Road	Not in a city	Anne Arundel	MD	03
8-HR RUN AVG BEGIN HOUR	5121	0.076	0.074	0.07	0.068	1	1.00	214	214	100	0	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
8-HR RUN AVG BEGIN HOUR	8441	0.086	0.074	0.071	0.071	1	1.10	214	196	92	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
8-HR RUN AVG BEGIN HOUR	4921	0.076	0.072	0.069	0.068	1	1.10	214	201	94	0	None	1	240090011	350 Stafford Road	Not in a city	Calvert	MD	03
8-HR RUN AVG BEGIN HOUR	5098	0.074	0.07	0.07	0.068	0	0.00	214	212	99	0	None	1	240130001	1300 W. Old Liberty Road	Not in a city	Carroll	MD	03
8-HR RUN AVG BEGIN HOUR	4949	0.083	0.077	0.076	0.072	3	3.20	214	201	94	0	None	1	240150003	4600 Telegraph Road	Not in a city	Cecil	MD	03
8-HR RUN AVG BEGIN HOUR	5121	0.072	0.071	0.068	0.066	0	0.00	214	214	100	0	None	1	240170010	Oaks Road	Hughesville	Charles	MD	03
8-HR RUN AVG BEGIN HOUR	5049	0.073	0.072	0.072	0.069	0	0.00	214	208	97	0	None	1	240210037	Frederick County Airport ,180 E Airport Drive	Frederick	Frederick	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2009
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	8676	0.071	0.069	0.065	0.065	0	0.00	214	212	99	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
8-HR RUN AVG BEGIN HOUR	5012	0.109	0.091	0.085	0.083	9	9.40	214	205	96	0	None	1	240251001	Edgewood Chemical Biological Center (Apg), Waehli Road	Edgewood	Harford	MD	03
8-HR RUN AVG BEGIN HOUR	5102	0.081	0.079	0.073	0.069	2	2.00	214	212	99	0	None	1	240259001	3560 Aldino Road	Not in a city	Harford	MD	03
8-HR RUN AVG BEGIN HOUR	5008	0.075	0.071	0.066	0.066	0	0.00	214	207	97	0	None	1	240290002	Millington Wildlife Management Area, Massey - Maryland Line Road (Route 330)	Millington	Kent	MD	03
8-HR RUN AVG BEGIN HOUR	5044	0.074	0.072	0.071	0.07	0	0.00	214	209	98	0	None	1	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Rockville	Montgomery	MD	03
8-HR RUN AVG BEGIN HOUR	8143	0.076	0.073	0.071	0.07	1	1.10	214	189	88	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
8-HR RUN AVG BEGIN HOUR	5121	0.071	0.068	0.068	0.067	0	0.00	214	214	100	0	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2009
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	5106	0.07	0.069	0.066	0.065	0	0.00	214	211	99	0	None	1	240430009	18530 Roxbury Road	Hagerstown	Washington	MD	03
8-HR RUN AVG BEGIN HOUR	3703	0.062	0.062	0.062	0.061	0	0.00	214	154	72	0	None	1	240471001	Assateague Island National Seashore	Not in a city	Worcester	MD	03
8-HR RUN AVG BEGIN HOUR	4766	0.072	0.07	0.067	0.066	0	0.00	214	198	93	0	None	1	245100054	Furley E.S. Recreational Center, 4633 Furley Avenue.	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2010
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	4980	0.116	0.111	0.109	0.106	0	0.00	214	207	97	1	None	1	240030014	Davidsonville Recreation Center, 3801 Queen Anne Bridge Road	Not in a city	Anne Arundel	MD	03
1 HOUR	5089	0.11	0.101	0.099	0.096	0	0.00	214	212	99	2	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
1 HOUR	8306	0.128	0.112	0.103	0.1	1	1.00	214	203	95	3	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	5019	0.114	0.107	0.099	0.096	0	0.00	214	210	98	1	None	1	240090011	350 Stafford Road	Not in a city	Calvert	MD	03
1 HOUR	5088	0.112	0.094	0.093	0.091	0	0.00	214	211	99	1	None	1	240130001	1300 W. Old Liberty Road	Not in a city	Carroll	MD	03
1 HOUR	4915	0.112	0.106	0.097	0.095	0	0.00	214	200	93	4	None	1	240150003	4600 Telegraph Road	Not in a city	Cecil	MD	03
1 HOUR	5111	0.104	0.103	0.102	0.091	0	0.00	214	213	100	1	None	1	240170010	Oaks Road	Hughesville	Charles	MD	03
1 HOUR	5117	0.106	0.099	0.097	0.096	0	0.00	214	214	100	0	None	1	240210037	Frederick County Airport ,180 E Airport Drive	Frederick	Frederick	MD	03
1 HOUR	8663	0.097	0.09	0.087	0.084	0	0.00	214	213	100	1	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
1 HOUR	4777	0.129	0.119	0.113	0.112	1	1.10	214	199	93	1	None	1	240251001	Edgewood Chemical Biological Center (Apg), Waehli Road	Edgewood	Harford	MD	03
1 HOUR	5089	0.103	0.103	0.096	0.096	0	0.00	214	210	98	2	None	1	240259001	3560 Aldino Road	Not in a city	Harford	MD	03
1 HOUR	5099	0.098	0.096	0.095	0.089	0	0.00	214	213	100	1	None	1	240290002	Millington Wildlife Management Area, Massey - Maryland Line Road (Route 330)	Millington	Kent	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2010
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	4782	0.102	0.102	0.098	0.094	0	0.00	214	200	93	0	None	1	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Rockville	Montgomery	MD	03
1 HOUR	8373	0.122	0.102	0.101	0.1	0	0.00	214	205	96	2	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
1 HOUR	5076	0.108	0.108	0.105	0.103	0	0.00	214	210	98	4	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
1 HOUR	5117	0.101	0.091	0.091	0.088	0	0.00	214	213	100	1	None	1	240430009	18530 Roxbury Road	Hagerstown	Washington	MD	03
1 HOUR	4175	0.117	0.091	0.086	0.084	0	0.00	214	173	81	0	None	1	240471001	Assateague Island National Seashore	Not in a city	Worcester	MD	03
1 HOUR	4527	0.118	0.101	0.094	0.092	0	0.00	214	187	87	4	None	1	245100054	Furley E.S. Recreational Center, 4633 Furley Avenue.	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2010
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	4972	0.099	0.099	0.096	0.087	12	12.30	214	208	97	0	None	1	240030014	Davidsonville Recreation Center, 3801 Queen Anne Bridge Road	Not in a city	Anne Arundel	MD	03
8-HR RUN AVG BEGIN HOUR	5082	0.092	0.086	0.085	0.078	6	6.10	214	211	99	0	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
8-HR RUN AVG BEGIN HOUR	8301	0.115	0.09	0.087	0.084	15	16.10	214	200	93	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
8-HR RUN AVG BEGIN HOUR	5010	0.098	0.097	0.09	0.087	8	8.20	214	208	97	0	None	1	240090011	350 Stafford Road	Not in a city	Calvert	MD	03
8-HR RUN AVG BEGIN HOUR	5082	0.085	0.084	0.083	0.083	6	6.10	214	210	98	0	None	1	240130001	1300 W. Old Liberty Road	Not in a city	Carroll	MD	03
8-HR RUN AVG BEGIN HOUR	4898	0.09	0.088	0.085	0.082	11	11.80	214	199	93	0	None	1	240150003	4600 Telegraph Road	Not in a city	Cecil	MD	03
8-HR RUN AVG BEGIN HOUR	5112	0.093	0.087	0.087	0.082	7	7.00	214	213	100	0	None	1	240170010	Oaks Road	Hughesville	Charles	MD	03
8-HR RUN AVG BEGIN HOUR	5114	0.093	0.085	0.084	0.083	7	7.00	214	213	100	0	None	1	240210037	Frederick County Airport ,180 E Airport Drive	Frederick	Frederick	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2010
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	8682	0.085	0.083	0.082	0.078	5	5.00	214	213	100	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
8-HR RUN AVG BEGIN HOUR	4764	0.11	0.101	0.097	0.096	27	29.20	214	198	93	0	None	1	240251001	Edgewood Chemical Biological Center (Apg), Waehli Road	Edgewood	Harford	MD	03
8-HR RUN AVG BEGIN HOUR	5084	0.086	0.086	0.081	0.08	8	8.20	214	209	98	0	None	1	240259001	3560 Aldino Road	Not in a city	Harford	MD	03
8-HR RUN AVG BEGIN HOUR	5106	0.093	0.083	0.076	0.074	3	3.00	214	213	100	0	None	1	240290002	Millington Wildlife Management Area, Massey - Maryland Line Road (Route 330)	Millington	Kent	MD	03
8-HR RUN AVG BEGIN HOUR	4773	0.081	0.08	0.079	0.077	5	5.40	214	197	92	0	None	1	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Rockville	Montgomery	MD	03
8-HR RUN AVG BEGIN HOUR	8366	0.094	0.091	0.087	0.085	16	16.80	214	204	95	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
8-HR RUN AVG BEGIN HOUR	5072	0.09	0.09	0.088	0.085	9	9.30	214	208	97	0	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2010
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	5120	0.09	0.082	0.079	0.078	5	5.00	214	213	100	0	None	1	240430009	18530 Roxbury Road	Hagerstown	Washington	MD	03
8-HR RUN AVG BEGIN HOUR	4163	0.1	0.084	0.076	0.075	3	3.80	214	169	79	0	None	1	240471001	Assateague Island National Seashore	Not in a city	Worcester	MD	03
8-HR RUN AVG BEGIN HOUR	4514	0.1	0.077	0.075	0.074	2	2.30	214	184	86	0	None	1	245100054	Furley E.S. Recreational Center, 4633 Furley Avenue.	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2011
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	5002	0.111	0.11	0.102	0.098	0	0.00	214	208	97	1	None	1	240030014	Davidsonville Recreation Center, 3801 Queen Anne Bridge Road	Not in a city	Anne Arundel	MD	03
1 HOUR	4713	0.113	0.103	0.103	0.094	0	0.00	214	195	91	2	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
1 HOUR	8407	0.112	0.109	0.106	0.103	0	0.00	214	203	95	6	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	5031	0.109	0.107	0.107	0.095	0	0.00	214	210	98	2	None	1	240090011	350 Stafford Road	Not in a city	Calvert	MD	03
1 HOUR	5034	0.099	0.089	0.085	0.085	0	0.00	214	210	98	2	None	1	240130001	1300 W. Old Liberty Road	Not in a city	Carroll	MD	03
1 HOUR	5084	0.114	0.112	0.111	0.105	0	0.00	214	210	98	4	None	1	240150003	4600 Telegraph Road	Not in a city	Cecil	MD	03
1 HOUR	4964	0.108	0.098	0.096	0.095	0	0.00	214	206	96	0	None	1	240170010	Oaks Road	Hughesville	Charles	MD	03
1 HOUR	7642	0.1	0.094	0.092	0.091	0	0.00	214	211	99	3	None	1	240199991	Blackwater National Wildlife Refuge, Cambridge, Md 21613	Not in a city	Dorchester	MD	03
1 HOUR	5117	0.09	0.089	0.084	0.083	0	0.00	214	214	100	0	None	1	240210037	Frederick County Airport ,180 E Airport Drive	Frederick	Frederick	MD	03
1 HOUR	8396	0.091	0.081	0.079	0.078	0	0.00	214	200	93	8	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
1 HOUR	5023	0.131	0.121	0.118	0.118	1	1.00	214	209	98	3	None	1	240251001	Edgewood Chemical Biological Center (Apg), Waehli Road	Edgewood	Harford	MD	03
1 HOUR	4845	0.114	0.114	0.113	0.108	0	0.00	214	201	94	2	None	1	240259001	3560 Aldino Road	Not in a city	Harford	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2011
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	5043	0.113	0.103	0.099	0.099	0	0.00	214	208	97	4	None	1	240290002	Millington Wildlife Management Area, Massey - Maryland Line Road (Route 330)	Millington	Kent	MD	03
1 HOUR	5084	0.097	0.097	0.096	0.092	0	0.00	214	211	99	2	None	1	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Rockville	Montgomery	MD	03
1 HOUR	7989	0.114	0.109	0.093	0.093	0	0.00	214	190	89	3	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
1 HOUR	5107	0.11	0.11	0.106	0.105	0	0.00	214	213	100	1	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
1 HOUR	5840	0.113	0.102	0.097	0.095	0	0.00	214	185	86	3	None	1	240339991	Powder Mill Rd, Laurel, Md 20708	Not in a city	Prince George's	MD	03
1 HOUR	5119	0.099	0.085	0.084	0.083	0	0.00	214	214	100	0	None	1	240430009	18530 Roxbury Road	Hagerstown	Washington	MD	03
1 HOUR	4883	0.107	0.106	0.094	0.092	0	0.00	214	203	95	1	None	1	245100054	Furley E.S. Recreational Center, 4633 Furley Avenue.	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2011
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	4990	0.094	0.092	0.088	0.087	11	11.40	214	206	96	0	None	1	240030014	Davidsonville Recreation Center, 3801 Queen Anne Bridge Road	Not in a city	Anne Arundel	MD	03
8-HR RUN AVG BEGIN HOUR	4703	0.092	0.088	0.086	0.086	9	10.00	214	193	90	0	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
8-HR RUN AVG BEGIN HOUR	8386	0.101	0.091	0.087	0.085	12	12.50	214	205	96	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
8-HR RUN AVG BEGIN HOUR	5023	0.093	0.092	0.087	0.082	6	6.20	214	206	96	0	None	1	240090011	350 Stafford Road	Not in a city	Calvert	MD	03
8-HR RUN AVG BEGIN HOUR	5024	0.085	0.08	0.079	0.079	5	5.10	214	208	97	0	None	1	240130001	1300 W. Old Liberty Road	Not in a city	Carroll	MD	03
8-HR RUN AVG BEGIN HOUR	5080	0.096	0.094	0.092	0.089	8	8.20	214	210	98	0	None	1	240150003	4600 Telegraph Road	Not in a city	Cecil	MD	03
8-HR RUN AVG BEGIN HOUR	4957	0.098	0.087	0.086	0.085	7	7.30	214	205	96	0	None	1	240170010	Oaks Road	Hughesville	Charles	MD	03
8-HR RUN AVG BEGIN HOUR	7659	0.088	0.084	0.082	0.082	9	9.20	214	210	98	0	None	1	240199991	Blackwater National Wildlife Refuge, Cambridge, Md 21613	Not in a city	Dorchester	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2011
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	5121	0.085	0.082	0.078	0.077	6	6.00	214	214	100	0	None	1	240210037	Frederick County Airport ,180 E Airport Drive	Frederick	Frederick	MD	03
8-HR RUN AVG BEGIN HOUR	8419	0.076	0.073	0.072	0.07	1	1.10	214	196	92	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
8-HR RUN AVG BEGIN HOUR	5011	0.114	0.107	0.106	0.098	17	17.70	214	206	96	0	None	1	240251001	Edgewood Chemical Biological Center (Apg), Waehli Road	Edgewood	Harford	MD	03
8-HR RUN AVG BEGIN HOUR	4835	0.098	0.09	0.088	0.085	13	14.00	214	199	93	0	None	1	240259001	3560 Aldino Road	Not in a city	Harford	MD	03
8-HR RUN AVG BEGIN HOUR	5020	0.1	0.092	0.091	0.084	11	11.40	214	206	96	0	None	1	240290002	Millington Wildlife Management Area, Massey - Maryland Line Road (Route 330)	Millington	Kent	MD	03
8-HR RUN AVG BEGIN HOUR	5079	0.088	0.085	0.082	0.081	5	5.10	214	210	98	0	None	1	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Rockville	Montgomery	MD	03
8-HR RUN AVG BEGIN HOUR	7946	0.094	0.091	0.088	0.083	7	8.20	214	182	85	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: Ozone
Year: 2011
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	5087	0.095	0.092	0.09	0.086	14	14.10	214	213	100	0	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
8-HR RUN AVG BEGIN HOUR	5845	0.092	0.086	0.085	0.084	7	8.30	214	181	85	0	None	1	240339991	Powder Mill Rd, Laurel, Md 20708	Not in a city	Prince George's	MD	03
8-HR RUN AVG BEGIN HOUR	5109	0.084	0.076	0.076	0.074	3	3.00	214	214	100	0	None	1	240430009	18530 Roxbury Road	Hagerstown	Washington	MD	03
8-HR RUN AVG BEGIN HOUR	4878	0.087	0.084	0.083	0.082	7	7.40	214	203	95	0	None	1	245100054	Furley E.S. Recreational Center, 4633 Furley Avenue.	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2009
Exceptional Events: Included (if any)

Duration Description=24 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24 HOUR	330	30.8	29.7	28.4	27.5	25	11	None	1	240031003	Anne Arundel Co. Public Works Bldg. 7409 Baltimore Annapolis Blvd.	Glen Burnie	Anne Arundel	MD	03
24 HOUR	122	25.5	24	22.1	21.6	22	10.2	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	30	25.7	23.2	18.6	18	26	11	None	2	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	344	40.5	38	37.2	35.5	31	11	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
24 HOUR	116	35.1	27	21.9	21.8	22	9.4	None	1	240150003	4600 Telegraph Road	Not in a city	Cecil	MD	03
24 HOUR	115	33.2	23.3	21.5	20.7	22	9.6	None	1	240251001	Edgewood Chemical Biological Center (Apg), Waehli Road	Edgewood	Harford	MD	03
24 HOUR	117	29.2	22.7	21.5	20.5	22	9.4	None	1	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Rockville	Montgomery	MD	03
24 HOUR	118	28.1	23.5	21.2	20.4	21	10.7	None	1	240330025	Bladensburg Volunteer Fire Department, 4213 Edmondson Road	Bladensburg	Prince George's	MD	03
24 HOUR	112	21.7	19	17.7	17.3	18	8.7	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24 HOUR	117	27.7	20.9	18.6	16.8	19	8.9	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
24 HOUR	32	15	14.9	14.7	14.2	15	8.8	None	2	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
24 HOUR	122	24.6	23.5	23.2	23.2	23	9.7	None	1	240430009	18530 Roxbury Road	Hagerstown	Washington	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2009
Exceptional Events: Included (if any)

Duration Description=24 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24 HOUR	121	28.5	25.9	22.5	21.7	23	10.1	None	1	245100006	Northeast Police Station, 1900 Argonne Drive	Baltimore	Baltimore (City)	MD	03
24 HOUR	342	32.8	29.4	27.4	25.9	24	10.3	None	1	245100007	Northwest Police Station, 5271 Reistertown Road	Baltimore	Baltimore (City)	MD	03
24 HOUR	113	36.2	34	27.6	23.4	28	11.1	None	1	245100008	Baltimore City Fire Dept.-Truck Company 20; 5714 Eastern Avenue , Baltimore, Maryland 21224	Baltimore	Baltimore (City)	MD	03
24 HOUR	320	37.1	34	34	32.8	28	11.2	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2009
Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	340	37.9	37.3	31	30.2	28	10.4	None	3	240150003	4600 Telegraph Road	Not in a city	Cecil	MD	03
24-HR BLK AVG	349	31	27.9	24.8	23.9	23	10.2	None	3	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Rockville	Montgomery	MD	03
24-HR BLK AVG	354	31	27.8	27	26.7	24	10.5	None	3	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24-HR BLK AVG	359	39.7	36.8	35.7	35.5	28	12.1	None	3	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2010
Exceptional Events: Included (if any)

Duration Description=24 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24 HOUR	352	36.1	34.7	33.4	33.1	28	11	None	1	240031003	Anne Arundel Co. Public Works Bldg. 7409 Baltimore Annapolis Blvd.	Glen Burnie	Anne Arundel	MD	03
24 HOUR	118	32	29.7	21.1	21	21	10.3	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	30	31.5	20	19.1	17.7	32	11.5	None	2	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	112	37.3	33.6	28.6	25.2	29	11.6	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
24 HOUR	57	20.8	18.4	18.4	17	18	9.2	None	1	240150003	4600 Telegraph Road	Not in a city	Cecil	MD	03
24 HOUR	112	24.4	23.2	21.6	20.7	22	9.5	None	1	240251001	Edgewood Chemical Biological Center (Apg), Waehli Road	Edgewood	Harford	MD	03
24 HOUR	50	18.6	17.7	17.2	16.9	19	9.1	None	1	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Rockville	Montgomery	MD	03
24 HOUR	115	35.7	32.4	24.9	24.9	25	11.5	None	1	240330025	Bladensburg Volunteer Fire Department, 4213 Edmondson Road	Bladensburg	Prince George's	MD	03
24 HOUR	107	34.4	20.3	19.8	18.6	20	9.4	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24 HOUR	12	17.2	14.4	14	13.8	17	9.8	None	2	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24 HOUR	112	21.4	21.3	20.9	19.9	21	9.5	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
24 HOUR	27	19.3	18.6	15.1	14.2	19	10.1	None	2	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2010
Exceptional Events: Included (if any)

Duration Description=24 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24 HOUR	58	30.2	21.2	20.3	19.5	21	10.5	None	1	240430009	18530 Roxbury Road	Hagerstown	Washington	MD	03
24 HOUR	118	31.4	25	21.5	21.5	22	10.1	None	1	245100006	Northeast Police Station, 1900 Argonne Drive	Baltimore	Baltimore (City)	MD	03
24 HOUR	118	33.4	25.8	21.5	20.7	22	10.3	None	1	245100007	Northwest Police Station, 5271 Reistertown Road	Baltimore	Baltimore (City)	MD	03
24 HOUR	319	37.3	35.3	35.1	33.2	29	11	None	1	245100008	Baltimore City Fire Dept.-Truck Company 20; 5714 Eastern Avenue , Baltimore, Maryland 21224	Baltimore	Baltimore (City)	MD	03
24 HOUR	297	34.1	32.1	32	30.7	30	10.9	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2010
Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	315	34.8	33.4	33	32.7	32	12	None	3	240150003	4600 Telegraph Road	Not in a city	Cecil	MD	03
24-HR BLK AVG	178	35.9	28.5	28.3	27.5	28	10.8	None	3	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
24-HR BLK AVG	173	30.5	28.8	27.9	25.9	26	9.2	None	3	240290002	Millington Wildlife Management Area, Massey - Maryland Line Road (Route 330)	Millington	Kent	MD	03
24-HR BLK AVG	352	35.8	33.8	33.1	29.6	28	11.1	None	3	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Rockville	Montgomery	MD	03
24-HR BLK AVG	352	39.5	38.7	38.1	32.6	27	12.1	None	3	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24-HR BLK AVG	161	39	36.8	34.1	31	31	12.6	None	3	240430009	18530 Roxbury Road	Hagerstown	Washington	MD	03
24-HR BLK AVG	353	38.1	37.7	35.9	35.7	30	12.7	None	3	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2011
Exceptional Events: Included (if any)

Duration Description=24 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24 HOUR	112	26.4	24.7	24.4	22.7	24	10.7	None	1	240031003	Anne Arundel Co. Public Works Bldg. 7409 Baltimore Annapolis Blvd.	Glen Burnie	Anne Arundel	MD	03
24 HOUR	110	28.6	27.2	22.8	20.9	23	9.7	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	28	26.8	21.2	20.2	17.5	27	10	None	2	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	116	26.7	26.6	26.3	26.3	26	10.7	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
24 HOUR	72	25	24.5	20.6	20.5	25	10.3	None	1	240251001	Edgewood Chemical Biological Center (Apg), Waehli Road	Edgewood	Harford	MD	03
24 HOUR	108	27	25.4	22.6	21.6	23	10.1	None	1	240330025	Bladensburg Volunteer Fire Department, 4213 Edmondson Road	Bladensburg	Prince George's	MD	03
24 HOUR	123	24.7	22	21.8	21	22	8.7	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24 HOUR	37	24.3	15.1	12.7	12.7	24	8.2	None	2	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24 HOUR	118	28.8	25.8	21.1	20.4	21	8.9	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
24 HOUR	28	15	13.9	12.7	11.9	15	7.8	None	2	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
24 HOUR	115	26.4	25.2	23.2	21.7	23	9.9	None	1	245100006	Northeast Police Station, 1900 Argonne Drive	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2011
Exceptional Events: Included (if any)

Duration Description=24 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24 HOUR	118	51.7	28.1	24.2	22.7	24	10	None	1	245100007	Northwest Police Station, 5271 Reistertown Road	Baltimore	Baltimore (City)	MD	03
24 HOUR	110	28.2	27.4	24.5	23.4	25	10.6	None	1	245100008	Baltimore City Fire Dept.-Truck Company 20; 5714 Eastern Avenue , Baltimore, Maryland 21224	Baltimore	Baltimore (City)	MD	03
24 HOUR	251	36	31.9	28.6	28	25	10.8	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2011
Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	336	37.2	32.1	31.4	30.5	29	10.9	None	3	240150003	4600 Telegraph Road	Not in a city	Cecil	MD	03
24-HR BLK AVG	314	35	31.3	31.1	29.4	24	10.7	None	3	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
24-HR BLK AVG	118	24.6	24.3	20.6	19.4	21	10.8	None	3	240251001	Edgewood Chemical Biological Center (Apg), Waehli Road	Edgewood	Harford	MD	03
24-HR BLK AVG	341	38	35.3	34.4	34	28	10.9	Included	3	240290002	Millington Wildlife Management Area, Massey - Maryland Line Road (Route 330)	Millington	Kent	MD	03
24-HR BLK AVG	331	31.8	30.5	30.2	29.9	25	10.9	None	3	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Rockville	Montgomery	MD	03
24-HR BLK AVG	344	76.1	35.3	31.5	29.5	27	11.8	Included	3	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24-HR BLK AVG	340	34.7	32.6	32.5	31.7	28	11.5	None	3	240430009	18530 Roxbury Road	Hagerstown	Washington	MD	03
24-HR BLK AVG	359	39.5	35.4	32.1	32	29	13.1	None	3	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: SO2
Year: 2009
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8436	56	55	54	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	8445	69	56	49	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
1 HOUR	8614	42	36	24	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: SO2
Year: 2009
Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	350	33	16	12	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
24-HR BLK AVG	354	38	22	15	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
24-HR BLK AVG	360	15	8	7	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: SO2
Year: 2010
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8296	33	22	20	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	8571	66	61	24	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
1 HOUR	8325	16	15	10	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: SO2
Year: 2010
Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	341	9	7	7	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
24-HR BLK AVG	361	10	10	8	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
24-HR BLK AVG	346	8	7	5	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: SO2
Year: 2011
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	7611	53	44	27	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
1 HOUR	8279	28	28	19	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
1 HOUR	7938	14	14	12	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Maryland
Pollutant: SO2
Year: 2011
Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	313	11	10	6	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
24-HR BLK AVG	342	9	7	6	0	None	1	240230002	Frostburg Reservoir, Finzel	Not in a city	Garrett	MD	03
24-HR BLK AVG	330	5	4	3	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

APPENDIX B

MONITORED AIR QUALITY DATA:

DELAWARE

Monitor Values Report

Geographic Area: Delaware
Pollutant: CO
Year: 2009
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8566	1.3	1.2	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
1 HOUR	8482	2.8	2.1	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: CO
Year: 2009
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG END HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG END HOUR	8594	1	1	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
8-HR RUN AVG END HOUR	8511	1.4	1.3	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: CO
Year: 2010
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	7828	1.4	1.4	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
1 HOUR	8618	1.7	1.6	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: CO
Year: 2010
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG END HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG END HOUR	7866	1.2	1.2	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
8-HR RUN AVG END HOUR	8607	1.3	1.2	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: CO
Year: 2011
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8615	1.6	1.1	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
1 HOUR	8422	1.7	1.7	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: CO
Year: 2011
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG END HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG END HOUR	8633	0.8	0.7	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
8-HR RUN AVG END HOUR	8429	1.5	1.1	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: NO2
Year: 2009
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	98th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	5799	68	62	54	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: NO2
Year: 2010
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	98th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8164	67	64	50	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: NO2
Year: 2011
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	98th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	6393	53	47	45	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: Ozone
Year: 2009
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	5088	0.078	0.078	0.073	0.073	0	0.00	214	211	99	3	None	1	100010002	State Road 384, Killens Pond Rd	Not in a city	Kent	DE	03
1 HOUR	7936	0.092	0.085	0.083	0.078	0	0.00	214	193	90	1	None	1	100031007	Lums Pond State Park	Not in a city	New Castle	DE	03
1 HOUR	2838	0.092	0.091	0.089	0.082	0	0.00	214	115	54	68	None	1	100031010	Brandywine Creek State Park	Not in a city	New Castle	DE	03
1 HOUR	8382	0.092	0.091	0.08	0.078	0	0.00	214	207	97	0	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
1 HOUR	5016	0.083	0.079	0.077	0.076	0	0.00	214	210	98	0	None	1	100051002	350 Virginia Ave Seaford	Seaford	Sussex	DE	03
1 HOUR	4983	0.088	0.085	0.08	0.079	0	0.00	214	209	98	1	None	1	100051003	Univ. Of De College Of Marine Studies	Lewes	Sussex	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: Ozone
Year: 2009
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	5098	0.069	0.069	0.068	0.066	0	0.00	214	211	99	0	None	1	100010002	State Road 384, Killens Pond Rd	Not in a city	Kent	DE	03
8-HR RUN AVG BEGIN HOUR	7936	0.078	0.077	0.068	0.068	2	2.20	214	193	90	0	None	1	100031007	Lums Pond State Park	Not in a city	New Castle	DE	03
8-HR RUN AVG BEGIN HOUR	2811	0.077	0.075	0.07	0.068	1	1.30	214	113	53	69	None	1	100031010	Brandywine Creek State Park	Not in a city	New Castle	DE	03
8-HR RUN AVG BEGIN HOUR	8395	0.076	0.069	0.069	0.069	1	1.00	214	207	97	0	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
8-HR RUN AVG BEGIN HOUR	5038	0.072	0.069	0.067	0.067	0	0.00	214	209	98	0	None	1	100051002	350 Virginia Ave Seaford	Seaford	Sussex	DE	03
8-HR RUN AVG BEGIN HOUR	5017	0.072	0.07	0.07	0.069	0	0.00	214	207	97	0	None	1	100051003	Univ. Of De College Of Marine Studies	Lewes	Sussex	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: Ozone
Year: 2010
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	6540	0.108	0.105	0.097	0.089	0	0.00	214	213	100	1	None	1	100010002	State Road 384, Killens Pond Rd	Not in a city	Kent	DE	03
1 HOUR	7919	0.098	0.094	0.093	0.09	0	0.00	214	184	86	0	None	1	100031007	Lums Pond State Park	Not in a city	New Castle	DE	03
1 HOUR	4348	0.103	0.101	0.095	0.092	0	0.00	214	182	85	20	None	1	100031010	Brandywine Creek State Park	Not in a city	New Castle	DE	03
1 HOUR	8485	0.1	0.098	0.096	0.092	0	0.00	214	208	97	1	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
1 HOUR	6533	0.106	0.095	0.095	0.094	0	0.00	214	212	99	2	None	1	100051002	350 Virginia Ave Seaford	Seaford	Sussex	DE	03
1 HOUR	6378	0.11	0.109	0.107	0.102	0	0.00	214	202	94	6	None	1	100051003	Univ. Of De College Of Marine Studies	Lewes	Sussex	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: Ozone
Year: 2010
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	6564	0.092	0.089	0.087	0.077	5	5.00	214	213	100	0	None	1	100010002	State Road 384, Killens Pond Rd	Not in a city	Kent	DE	03
8-HR RUN AVG BEGIN HOUR	7935	0.086	0.085	0.08	0.08	6	7.00	214	184	86	0	None	1	100031007	Lums Pond State Park	Not in a city	New Castle	DE	03
8-HR RUN AVG BEGIN HOUR	4349	0.086	0.084	0.08	0.079	9	9.70	214	181	85	19	None	1	100031010	Brandywine Creek State Park	Not in a city	New Castle	DE	03
8-HR RUN AVG BEGIN HOUR	8484	0.087	0.087	0.08	0.08	9	9.30	214	207	97	0	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
8-HR RUN AVG BEGIN HOUR	6537	0.091	0.087	0.086	0.084	9	9.10	214	212	99	0	None	1	100051002	350 Virginia Ave Seaford	Seaford	Sussex	DE	03
8-HR RUN AVG BEGIN HOUR	6371	0.098	0.096	0.09	0.083	6	6.40	214	200	93	0	None	1	100051003	Univ. Of De College Of Marine Studies	Lewes	Sussex	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: Ozone
Year: 2011
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8731	0.107	0.103	0.089	0.082	0	0.00	214	214	100	0	None	1	100010002	State Road 384, Killens Pond Rd	Not in a city	Kent	DE	03
1 HOUR	8712	0.095	0.095	0.094	0.092	0	0.00	214	214	100	0	None	1	100031007	Lums Pond State Park	Not in a city	New Castle	DE	03
1 HOUR	4922	0.101	0.096	0.096	0.093	0	0.00	214	171	80	1	None	1	100031010	Brandywine Creek State Park	Not in a city	New Castle	DE	03
1 HOUR	8559	0.113	0.11	0.106	0.106	0	0.00	214	206	96	2	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
1 HOUR	7780	0.1	0.098	0.097	0.095	0	0.00	214	198	93	5	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03
1 HOUR	8732	0.109	0.097	0.085	0.084	0	0.00	214	214	100	0	None	1	100051002	350 Virginia Ave Seaford	Seaford	Sussex	DE	03
1 HOUR	8718	0.096	0.095	0.094	0.092	0	0.00	214	213	100	1	None	1	100051003	Univ. Of De College Of Marine Studies	Lewes	Sussex	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: Ozone
Year: 2011
Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG BEGIN HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	Actual Exc	Est Exc	Required Days	Valid Days	Percent Days	Missing Days	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG BEGIN HOUR	8755	0.094	0.088	0.076	0.072	3	3.00	214	214	100	0	None	1	100010002	State Road 384, Killens Pond Rd	Not in a city	Kent	DE	03
8-HR RUN AVG BEGIN HOUR	8735	0.082	0.079	0.078	0.078	7	7.00	214	214	100	0	None	1	100031007	Lums Pond State Park	Not in a city	New Castle	DE	03
8-HR RUN AVG BEGIN HOUR	4963	0.086	0.082	0.082	0.078	6	7.60	214	169	79	0	None	1	100031010	Brandywine Creek State Park	Not in a city	New Castle	DE	03
8-HR RUN AVG BEGIN HOUR	8560	0.1	0.097	0.093	0.083	9	9.50	214	202	94	0	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
8-HR RUN AVG BEGIN HOUR	7758	0.082	0.08	0.079	0.078	5	5.50	214	193	90	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03
8-HR RUN AVG BEGIN HOUR	8749	0.094	0.081	0.078	0.077	6	6.00	214	214	100	0	None	1	100051002	350 Virginia Ave Seaford	Seaford	Sussex	DE	03
8-HR RUN AVG BEGIN HOUR	8736	0.085	0.084	0.083	0.075	3	3.00	214	213	100	0	None	1	100051003	Univ. Of De College Of Marine Studies	Lewes	Sussex	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: PM2.5
Year: 2009
Exceptional Events: Included (if any)

Duration Description=24 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24 HOUR	117	27.4	22	20.7	20.4	21	9.5	None	1	100010002	State Road 384, Killens Pond Rd	Not in a city	Kent	DE	03
24 HOUR	115	22.5	20.8	19.4	19	19	9.4	None	1	100010003	Water St. Dover	Dover	Kent	DE	03
24 HOUR	102	31.4	30.7	23.2	22.6	23	10.2	None	1	100031003	River Road Park, Bellefonte	Not in a city	New Castle	DE	03
24 HOUR	101	27.3	20.9	20.6	19.5	21	10	None	1	100031007	Lums Pond State Park	Not in a city	New Castle	DE	03
24 HOUR	115	30.4	25.2	23.4	21.5	23	10.6	None	1	100031012	Univ. De North Campus	Newark	New Castle	DE	03
24 HOUR	345	40.2	35.6	34.6	34.1	28	11.2	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03
24 HOUR	48	31.3	24	20.8	20.2	31	11.9	None	2	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03
24 HOUR	111	22.2	21.2	20.2	19.4	20	9.7	None	1	100051002	350 Virginia Ave Seaford	Seaford	Sussex	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: PM2.5
Year: 2010
Exceptional Events: Included (if any)

Duration Description=24 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24 HOUR	109	30.1	21.6	21	20.2	21	9.3	None	1	100010002	State Road 384, Killens Pond Rd	Not in a city	Kent	DE	03
24 HOUR	114	29.7	29.1	24.9	21.5	25	9.7	None	1	100010003	Water St. Dover	Dover	Kent	DE	03
24 HOUR	117	28.9	26.2	24.3	23.6	24	10.2	None	1	100031003	River Road Park, Bellefonte	Not in a city	New Castle	DE	03
24 HOUR	114	28.6	27.9	27.5	19.7	28	10	None	1	100031007	Lums Pond State Park	Not in a city	New Castle	DE	03
24 HOUR	113	28.2	25.2	24.9	22	25	10.4	None	1	100031012	Univ. De North Campus	Newark	New Castle	DE	03
24 HOUR	345	40	32.7	30.4	30.3	28	10.6	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03
24 HOUR	51	25.9	22.9	20	19.2	26	11.3	None	2	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03
24 HOUR	110	31.2	30.6	26.5	22.5	27	9.9	None	1	100051002	350 Virginia Ave Seaford	Seaford	Sussex	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: PM2.5
Year: 2010
Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	347	64.8	47.8	36.3	36.2	33	12	None	3	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: PM2.5
Year: 2011
Exceptional Events: Included (if any)

Duration Description=24 HOUR

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24 HOUR	113	24.4	23.7	23.6	22.4	24	8.6	None	1	100010002	State Road 384, Killens Pond Rd	Not in a city	Kent	DE	03
24 HOUR	108	27.2	24.2	24.1	22.4	24	9.1	None	1	100010003	Water St. Dover	Dover	Kent	DE	03
24 HOUR	109	25.5	23	22.4	20.4	22	9.4	None	1	100031003	River Road Park, Bellefonte	Not in a city	New Castle	DE	03
24 HOUR	109	27	21.5	21	20.9	21	8.8	None	1	100031007	Lums Pond State Park	Not in a city	New Castle	DE	03
24 HOUR	107	26.2	23.9	22.2	22	22	10.4	None	1	100031012	Univ. De North Campus	Newark	New Castle	DE	03
24 HOUR	323	32	31.2	30.3	30.2	25	10.3	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03
24 HOUR	53	28.6	24.1	24	17.3	24	9.6	None	2	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03
24 HOUR	112	27.2	25.5	24.2	23.3	24	8.7	None	1	100051002	350 Virginia Ave Seaford	Seaford	Sussex	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: PM2.5
Year: 2011
Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	349	41	37.8	34.5	34.4	30	12.1	None	3	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: SO2
Year: 2009
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8155	43	30	28	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
1 HOUR	5235	64	43	41	0	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
1 HOUR	8056	32	30	28	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: SO2
Year: 2009
Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	340	14	14	7	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
24-HR BLK AVG	219	15	13	13	0	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
24-HR BLK AVG	335	11	10	8	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: SO2
Year: 2010
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	6956	28	14	13	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
1 HOUR	2412	25	22	25	0	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
1 HOUR	8543	65	54	32	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: SO2
Year: 2010
Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	290	5	5	5	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
24-HR BLK AVG	99	22	19	22	0	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
24-HR BLK AVG	358	14	14	9	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: SO2
Year: 2011
Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	5805	13	12	12	0	None	1	100031007	Lums Pond State Park	Not in a city	New Castle	DE	03
1 HOUR	6455	17	16	15	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
1 HOUR	6687	33	21	19	0	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
1 HOUR	7699	28	19	14	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

Monitor Values Report

Geographic Area: Delaware
Pollutant: SO2
Year: 2011
Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	99th Percentile	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	230	7	5	5	0	None	1	100031007	Lums Pond State Park	Not in a city	New Castle	DE	03
24-HR BLK AVG	255	5	4	4	0	None	1	100031008	Route 9, Delaware City	Not in a city	New Castle	DE	03
24-HR BLK AVG	275	15	13	13	0	None	1	100031013	Bellevue State Park	Wilmington	New Castle	DE	03
24-HR BLK AVG	313	6	5	4	0	None	1	100032004	Mlk Blvd And Justison St.	Wilmington	New Castle	DE	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems. <http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: May 22, 2012

APPENDIX C

TRAFFIC DATA

MEMORANDUM

TO: Mr. Donald Sparklin, Chief
Environmental Planning Division
Office of Planning and Preliminary Engineering

ATTN: Ms. Chrissy Brandt

FROM: Morteza Tadayon, Chief
Travel Forecasting and Analysis Division
Office of Planning and Preliminary Engineering

DATE: May 29, 2012

SUBJECT: Project No: HA348B21
BRAC Intersection Capacity Improvements
MD 22 at Beards Hill Road
MD 22 at MD 462
Environmental Traffic Data
Harford County

In response to your memorandum requesting environmental traffic data on the subject projects, we offer the following:

The following scenarios were studied:

- Existing (2012)
- 2015 No-Build
- 2015 Build
- 2030 No-Build
- 2030 Build

The following analyses were performed:

- Multilane Highway analyses on MD 22 between Beards Hill Road and MD 462.

For each scenario, the following are provided (in PDF electronic files):

- Sketches showing hourly traffic volumes for each scenario.

  Note: We would point out that the volumes shown on the sketches represent unconstrained traffic based on projections from the BRAC Transportation Study for Aberdeen Proving Ground under "2015 with BRAC" and "2030 with BRAC" conditions. Also, diurnal volume data for the No-Build condition is identical to the diurnal volume data for the Build condition. The proposed improvements along MD 22 are local in-nature with the intent of providing additional operational benefit through the study intersections as opposed to an overall capacity enhancement to the corridor.

- Tables showing hourly traffic volumes for each scenario, broken out by vehicle classifications used for Air Quality and Noise analyses.

- Average Daily Traffic (ADT) and Design Hour Volume (DHV) breakdown of truck percentages.

- Diurnal curve data.

- Level of Service (LOS) volumes and operating speeds for the C/D, D/E, and E/F breakpoints.

- Analyses which provide hourly operating speeds, and levels of service.

- Sketches showing hourly speeds for each scenario.

  Note: Speed data included in this memo is based on Highway Capacity Manual (HCM) 2010 analyses for each scenario, except for peak hour speeds, which were adjusted based on supplemental analyses using Synchro arterial reports.

- Input assumptions for the HCM 2010 analyses for each scenario.

The following is also attached:

- Classification count used.

  Mainline: MD 22 - 0.20 Miles East of MD 132A (Beards Hill Road) (Station ID: B2320) – April 11-12, 2012

If we may be of any further assistance, please feel free to contact the writer at 410-545-5646 or Ms. Lisa Shemer, Assistant Division Chief, for the Travel Forecasting & Analysis Division at 410-545-5640.

By: _____
Matt Snare, P.E., PTOE
Travel Forecasting and Analysis Division

Attachments
cc: Mr. Derek Gunn (w/attachments)
Mr. Mike Kelly, Wilson T. Ballard (w/attachments)
Ms. Erin Kohn
Mr. Joseph Kresslein
Mr. Matthew Mann, Wilson T. Ballard (w/attachments)
Mr. Kenneth Polcak (w/attachments)

Maryland Department of Transportation
State Highway Administration
Highway Information Services Division
Classified Count Detail Report

Station ID: B2320 **County:** Harford
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: 04/11/2012 To 04/12/2012

04/11/2012 **Direction:** **Eastbound**

Beginning Hour	Class 1 Motor-cycles	Class 2 Passenger Cars	Class 3 Light Trucks	Class 4 Buses	Class 5 2 Axle 6 Tire	Class 6 3 Axle	Class 7 >= 4 Axle	Class 8 <= 4 Axle	Class 9 5 Axle	Class 10 >= 6 Axle	Class 11 <= 5 Axle	Class 12 6 Axle	Class 13 >= 7 Axle	Total
					Single-Unit Trucks & Single-Trailer Trucks					Multi-Trailer Trucks				
0:00	0	67	12	0	1	0	0	0	5	0	0	0	0	85
1:00	0	30	2	0	0	0	0	0	5	0	0	0	0	37
2:00	0	21	4	0	0	0	0	0	5	0	0	0	0	30
3:00	0	27	4	1	0	0	0	3	2	0	0	0	0	37
4:00	0	57	18	0	3	0	0	1	3	0	0	0	0	82
5:00	1	267	95	0	12	0	0	4	10	0	0	0	0	389
6:00	0	879	217	10	39	3	0	13	11	0	0	0	0	1,172
7:00	1	1,081	182	11	30	3	0	6	14	0	0	0	0	1,328
8:00	3	866	144	6	41	1	0	5	18	0	0	0	0	1,084
9:00	0	460	105	7	38	1	0	9	14	0	0	0	0	634
10:00	0	414	110	1	27	2	1	3	29	0	0	0	0	587
11:00	0	479	94	4	28	1	0	1	29	0	0	0	0	636
12:00	6	707	128	4	30	4	0	4	21	0	0	0	0	904
13:00	1	534	112	6	17	3	0	6	18	0	0	0	0	697
14:00	0	483	121	5	31	1	0	3	21	0	0	0	0	665
15:00	0	579	140	4	31	0	1	6	18	0	0	0	0	779
16:00	0	551	121	4	14	2	0	3	11	0	0	0	0	706
17:00	0	620	116	1	21	0	0	4	15	0	0	0	0	777
18:00	0	503	83	1	11	0	0	0	9	0	0	0	0	607
19:00	0	383	78	2	12	0	0	0	9	0	0	0	0	484
20:00	0	327	56	0	3	0	0	4	13	0	0	0	0	403
21:00	0	250	35	0	1	0	0	1	6	0	0	0	0	293
22:00	0	168	26	0	0	0	0	1	4	0	0	0	0	199
23:00	0	100	16	0	0	0	0	1	8	0	0	0	0	125
Total:	12	9,853	2,019	67	390	21	2	78	298	0	0	0	0	12,740
Percentage:	0.09%	77.34%	15.85%	0.53%	3.06%	0.16%	0.02%	0.61%	2.34%	0.00%	0.00%	0.00%	0.00%	100.00%
Total:	11,884			67	789									12,740
Percentage:	93.28%			0.53%	6.19%									100.00%

Maryland Department of Transportation
State Highway Administration
Highway Information Services Division
Classified Count Detail Report

Station ID: B2320 **County:** Harford
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: 04/11/2012 To 04/12/2012

04/11/2012 **Direction: Westbound**

					Single-Unit Trucks & Single-Trailer Trucks					Multi-Trailer Trucks				
Beginning Hour	Class 1 Motor-cycles	Class 2 Passenger Cars	Class 3 Light Trucks	Class 4 Buses	Class 5 2 Axle 6 Tire	Class 6 3 Axle	Class 7 >= 4 Axle	Class 8 <= 4 Axle	Class 9 5 Axle	Class 10 >= 6 Axle	Class 11 <= 5 Axle	Class 12 6 Axle	Class 13 >= 7 Axle	Total
0:00	0	39	4	0	2	0	0	1	13	0	0	0	0	59
1:00	2	26	4	0	0	2	0	9	14	0	0	0	0	57
2:00	0	20	5	2	0	0	0	2	10	0	0	0	0	39
3:00	0	31	5	0	1	0	0	2	11	0	0	0	0	50
4:00	0	68	20	1	4	0	0	4	9	0	0	0	0	106
5:00	0	151	53	3	9	0	0	0	10	0	0	0	0	226
6:00	0	272	80	4	33	0	0	2	13	0	0	0	0	404
7:00	0	397	95	4	33	1	0	10	16	0	0	0	0	556
8:00	0	409	131	9	33	2	0	4	14	0	0	0	0	602
9:00	0	400	125	5	39	1	0	5	24	0	0	0	0	599
10:00	0	364	138	5	52	1	0	4	21	0	0	0	0	585
11:00	5	626	157	7	41	3	0	7	14	0	0	0	0	860
12:00	1	635	161	5	45	0	0	8	29	0	0	0	0	884
13:00	0	488	151	2	32	0	0	3	23	0	0	0	0	699
14:00	0	540	170	15	40	0	0	10	14	0	0	0	0	789
15:00	0	767	217	6	51	1	1	14	14	0	0	0	0	1,071
16:00	4	955	215	8	55	1	0	17	10	0	0	0	0	1,265
17:00	3	924	162	9	31	1	0	14	14	0	0	0	0	1,158
18:00	3	668	157	6	24	0	0	7	14	0	0	0	0	879
19:00	3	387	88	1	18	1	0	1	16	0	0	0	0	515
20:00	0	280	61	1	11	0	0	5	13	0	0	0	0	371
21:00	0	154	39	1	6	0	0	1	12	0	0	0	0	213
22:00	0	129	23	0	0	0	0	1	4	0	0	0	0	157
23:00	0	75	10	0	3	0	0	3	14	0	0	0	0	105
Total:	21	8,805	2,271	94	563	14	1	134	346	0	0	0	0	12,249
Percentage:	0.17%	71.88%	18.54%	0.77%	4.60%	0.11%	0.01%	1.09%	2.82%	0.00%	0.00%	0.00%	0.00%	100.00%
Total:	11,097			94	1,058									12,249
Percentage:	90.60%			0.77%	8.64%									100.00%

Maryland Department of Transportation
State Highway Administration
Highway Information Services Division
Classified Count Detail Report

Station ID: B2320 **County:** Harford
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: 04/11/2012 To 04/12/2012

04/11/2012 ***** Summary *****

					Single-Unit Trucks & Single-Trailer Trucks					Multi-Trailer Trucks				
Beginning Hour	Class 1 Motor-cycles	Class 2 Passenger Cars	Class 3 Light Trucks	Class 4 Buses	Class 5 2 Axle 6 Tire	Class 6 3 Axle	Class 7 >= 4 Axle	Class 8 <= 4 Axle	Class 9 5 Axle	Class 10 >= 6 Axle	Class 11 <= 5 Axle	Class 12 6 Axle	Class 13 >= 7 Axle	Total
0:00	0	106	16	0	3	0	0	1	18	0	0	0	0	144
1:00	2	56	6	0	0	2	0	9	19	0	0	0	0	94
2:00	0	41	9	2	0	0	0	2	15	0	0	0	0	69
3:00	0	58	9	1	1	0	0	5	13	0	0	0	0	87
4:00	0	125	38	1	7	0	0	5	12	0	0	0	0	188
5:00	1	418	148	3	21	0	0	4	20	0	0	0	0	615
6:00	0	1,151	297	14	72	3	0	15	24	0	0	0	0	1,576
7:00	1	1,478	277	15	63	4	0	16	30	0	0	0	0	1,884
8:00	3	1,275	275	15	74	3	0	9	32	0	0	0	0	1,686
9:00	0	860	230	12	77	2	0	14	38	0	0	0	0	1,233
10:00	0	778	248	6	79	3	1	7	50	0	0	0	0	1,172
11:00	5	1,105	251	11	69	4	0	8	43	0	0	0	0	1,496
12:00	7	1,342	289	9	75	4	0	12	50	0	0	0	0	1,788
13:00	1	1,022	263	8	49	3	0	9	41	0	0	0	0	1,396
14:00	0	1,023	291	20	71	1	0	13	35	0	0	0	0	1,454
15:00	0	1,346	357	10	82	1	2	20	32	0	0	0	0	1,850
16:00	4	1,506	336	12	69	3	0	20	21	0	0	0	0	1,971
17:00	3	1,544	278	10	52	1	0	18	29	0	0	0	0	1,935
18:00	3	1,171	240	7	35	0	0	7	23	0	0	0	0	1,486
19:00	3	770	166	3	30	1	0	1	25	0	0	0	0	999
20:00	0	607	117	1	14	0	0	9	26	0	0	0	0	774
21:00	0	404	74	1	7	0	0	2	18	0	0	0	0	506
22:00	0	297	49	0	0	0	0	2	8	0	0	0	0	356
23:00	0	175	26	0	3	0	0	4	22	0	0	0	0	230
Total:	33	18,658	4,290	161	953	35	3	212	644	0	0	0	0	24,989
Percentage:	0.13%	74.66%	17.17%	0.64%	3.81%	0.14%	0.01%	0.85%	2.58%	0.00%	0.00%	0.00%	0.00%	100.00%
Total:	22,981			161	1,847									24,989
Percentage:	91.96%			0.64%	7.39%									100.00%

Maryland Department of Transportation
State Highway Administration
Highway Information Services Division
Classified Count Detail Report

Station ID: B2320 **County:** Harford
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: 04/11/2012 To 04/12/2012

04/12/2012 **Direction: Eastbound**

					Single-Unit Trucks & Single-Trailer Trucks					Multi-Trailer Trucks				
Beginning Hour	Class 1 Motor-cycles	Class 2 Passenger Cars	Class 3 Light Trucks	Class 4 Buses	Class 5 2 Axle 6 Tire	Class 6 3 Axle	Class 7 >= 4 Axle	Class 8 <= 4 Axle	Class 9 5 Axle	Class 10 >= 6 Axle	Class 11 <= 5 Axle	Class 12 6 Axle	Class 13 >= 7 Axle	Total
0:00	0	60	10	0	0	0	0	0	2	0	0	0	0	72
1:00	0	27	6	0	0	0	0	0	3	0	0	0	0	36
2:00	0	18	4	0	1	0	0	1	3	0	0	0	0	27
3:00	0	26	8	0	0	0	0	3	2	0	0	0	0	39
4:00	0	46	15	0	1	1	0	1	12	0	0	0	0	76
5:00	0	256	71	0	12	0	0	1	12	0	0	0	0	352
6:00	3	835	231	7	38	0	0	6	14	0	0	0	0	1,134
7:00	2	1,135	201	13	38	2	0	12	9	0	0	0	0	1,412
8:00	1	877	165	5	34	5	0	19	23	0	0	0	0	1,129
9:00	2	506	106	7	36	6	0	5	28	0	0	0	0	696
10:00	0	412	116	13	32	0	0	7	27	0	0	0	0	607
11:00	0	488	112	6	26	5	0	5	20	0	0	0	0	662
12:00	5	702	149	3	26	7	0	7	24	0	0	0	0	923
13:00	0	586	130	9	23	5	0	3	19	0	0	0	0	775
14:00	2	529	119	7	29	2	0	4	21	0	0	0	0	713
15:00	2	565	123	0	22	2	0	8	19	0	0	0	0	741
16:00	0	563	133	5	28	2	0	4	20	0	0	0	0	755
17:00	2	597	110	3	15	0	0	1	10	0	0	0	0	738
18:00	3	529	88	3	13	0	0	1	13	0	0	0	0	650
19:00	1	423	84	1	12	0	0	2	11	0	0	0	0	534
20:00	0	347	70	2	7	0	0	1	9	0	0	0	0	436
21:00	0	255	41	0	4	0	0	0	5	0	0	0	0	305
22:00	0	181	21	0	2	0	0	0	4	0	0	0	0	208
23:00	0	131	13	0	0	0	0	0	1	0	0	0	0	145
Total:	23	10,094	2,126	84	399	37	0	91	311	0	0	0	0	13,165
Percentage:	0.17%	76.67%	16.15%	0.64%	3.03%	0.28%	0.00%	0.69%	2.36%	0.00%	0.00%	0.00%	0.00%	100.00%
Total:	12,243			84	838									13,165
Percentage:	93.00%			0.64%	6.37%									100.00%

Maryland Department of Transportation
State Highway Administration
Highway Information Services Division
Classified Count Detail Report

Station ID: B2320 **County:** Harford
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: 04/11/2012 To 04/12/2012

04/12/2012 **Direction: Westbound**

					Single-Unit Trucks & Single-Trailer Trucks					Multi-Trailer Trucks				
Beginning Hour	Class 1 Motor-cycles	Class 2 Passenger Cars	Class 3 Light Trucks	Class 4 Buses	Class 5 2 Axle 6 Tire	Class 6 3 Axle	Class 7 >= 4 Axle	Class 8 <= 4 Axle	Class 9 5 Axle	Class 10 >= 6 Axle	Class 11 <= 5 Axle	Class 12 6 Axle	Class 13 >= 7 Axle	Total
0:00	0	43	10	1	0	1	0	1	10	0	0	0	0	66
1:00	0	27	7	0	0	0	0	2	10	0	0	0	0	46
2:00	0	14	1	0	0	0	0	1	15	0	0	0	0	31
3:00	0	25	9	0	4	0	0	2	8	0	0	0	0	48
4:00	0	66	19	1	1	0	0	2	10	0	0	0	0	99
5:00	0	157	53	6	12	0	0	1	16	0	0	0	0	245
6:00	2	264	82	0	26	0	2	2	5	0	0	0	0	383
7:00	0	387	112	3	23	0	0	4	9	0	0	0	0	538
8:00	0	382	97	14	39	3	0	5	14	0	0	0	0	554
9:00	1	356	141	7	43	2	0	3	19	0	0	0	0	572
10:00	0	392	143	8	42	3	1	4	16	0	0	0	0	609
11:00	0	639	174	15	48	0	0	11	19	0	0	0	0	906
12:00	0	585	189	9	45	2	0	10	22	0	0	0	0	862
13:00	3	485	164	15	35	2	0	11	22	0	0	0	0	737
14:00	0	585	180	15	56	2	0	13	18	0	0	0	0	869
15:00	3	758	233	7	42	3	0	11	13	0	0	0	0	1,070
16:00	3	846	181	11	50	5	0	26	12	0	0	0	0	1,134
17:00	1	972	208	6	38	1	0	9	16	0	0	0	0	1,251
18:00	1	677	149	3	19	1	0	7	20	0	0	0	0	877
19:00	1	374	112	3	17	0	0	5	18	0	0	0	0	530
20:00	0	260	54	1	18	1	0	5	12	0	0	0	0	351
21:00	0	171	45	3	4	0	0	1	14	0	0	0	0	238
22:00	1	127	23	4	2	0	0	1	9	0	0	0	0	167
23:00	0	106	16	1	1	0	0	5	11	0	0	0	0	140
Total:	16	8,698	2,402	133	565	26	3	142	338	0	0	0	0	12,323
Percentage:	0.13%	70.58%	19.49%	1.08%	4.58%	0.21%	0.02%	1.15%	2.74%	0.00%	0.00%	0.00%	0.00%	100.00%
Total:	11,116			133	1,074									12,323
Percentage:	90.21%			1.08%	8.72%									100.00%

Maryland Department of Transportation
State Highway Administration
Highway Information Services Division
Classified Count Detail Report

Station ID: B2320 **County:** Harford
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: 04/11/2012 To 04/12/2012

04/12/2012 ***** Summary *****

					Single-Unit Trucks & Single-Trailer Trucks					Multi-Trailer Trucks				
Beginning Hour	Class 1 Motor-cycles	Class 2 Passenger Cars	Class 3 Light Trucks	Class 4 Buses	Class 5 2 Axle 6 Tire	Class 6 3 Axle	Class 7 >= 4 Axle	Class 8 <= 4 Axle	Class 9 5 Axle	Class 10 >= 6 Axle	Class 11 <= 5 Axle	Class 12 6 Axle	Class 13 >= 7 Axle	Total
0:00	0	103	20	1	0	1	0	1	12	0	0	0	0	138
1:00	0	54	13	0	0	0	0	2	13	0	0	0	0	82
2:00	0	32	5	0	1	0	0	2	18	0	0	0	0	58
3:00	0	51	17	0	4	0	0	5	10	0	0	0	0	87
4:00	0	112	34	1	2	1	0	3	22	0	0	0	0	175
5:00	0	413	124	6	24	0	0	2	28	0	0	0	0	597
6:00	5	1,099	313	7	64	0	2	8	19	0	0	0	0	1,517
7:00	2	1,522	313	16	61	2	0	16	18	0	0	0	0	1,950
8:00	1	1,259	262	19	73	8	0	24	37	0	0	0	0	1,683
9:00	3	862	247	14	79	8	0	8	47	0	0	0	0	1,268
10:00	0	804	259	21	74	3	1	11	43	0	0	0	0	1,216
11:00	0	1,127	286	21	74	5	0	16	39	0	0	0	0	1,568
12:00	5	1,287	338	12	71	9	0	17	46	0	0	0	0	1,785
13:00	3	1,071	294	24	58	7	0	14	41	0	0	0	0	1,512
14:00	2	1,114	299	22	85	4	0	17	39	0	0	0	0	1,582
15:00	5	1,323	356	7	64	5	0	19	32	0	0	0	0	1,811
16:00	3	1,409	314	16	78	7	0	30	32	0	0	0	0	1,889
17:00	3	1,569	318	9	53	1	0	10	26	0	0	0	0	1,989
18:00	4	1,206	237	6	32	1	0	8	33	0	0	0	0	1,527
19:00	2	797	196	4	29	0	0	7	29	0	0	0	0	1,064
20:00	0	607	124	3	25	1	0	6	21	0	0	0	0	787
21:00	0	426	86	3	8	0	0	1	19	0	0	0	0	543
22:00	1	308	44	4	4	0	0	1	13	0	0	0	0	375
23:00	0	237	29	1	1	0	0	5	12	0	0	0	0	285
Total:	39	18,792	4,528	217	964	63	3	233	649	0	0	0	0	25,488
Percentage:	0.15%	73.73%	17.77%	0.85%	3.78%	0.25%	0.01%	0.91%	2.55%	0.00%	0.00%	0.00%	0.00%	100.00%
Total:	23,359			217	1,912									25,488
Percentage:	91.65%			0.85%	7.50%									100.00%

Maryland Department of Transportation
State Highway Administration
Highway Information Services Division
Classified Count Detail Report

Station ID: B2320 **County:** Harford
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: 04/11/2012 To 04/12/2012

***** Summary of Total Report *****

Beginning Hour	Class 1 Motor-cycles	Class 2 Passenger Cars	Class 3 Light Trucks	Class 4 Buses	Single-Unit Trucks & Single-Trailer Trucks: Class 5 2 Axle 6 Tire	Class 6 3 Axle	Class 7 >= 4 Axle	Class 8 <= 4 Axle	Class 9 5 Axle	Multi-Trailer Trucks: Class 10 >= 6 Axle	Class 11 <= 5 Axle	Class 12 6 Axle	Class 13 >= 7 Axle	Total
0:00	0	209	36	1	3	1	0	2	30	0	0	0	0	282
1:00	2	110	19	0	0	2	0	11	32	0	0	0	0	176
2:00	0	73	14	2	1	0	0	4	33	0	0	0	0	127
3:00	0	109	26	1	5	0	0	10	23	0	0	0	0	174
4:00	0	237	72	2	9	1	0	8	34	0	0	0	0	363
5:00	1	831	272	9	45	0	0	6	48	0	0	0	0	1,212
6:00	5	2,250	610	21	136	3	2	23	43	0	0	0	0	3,093
7:00	3	3,000	590	31	124	6	0	32	48	0	0	0	0	3,834
8:00	4	2,534	537	34	147	11	0	33	69	0	0	0	0	3,369
9:00	3	1,722	477	26	156	10	0	22	85	0	0	0	0	2,501
10:00	0	1,582	507	27	153	6	2	18	93	0	0	0	0	2,388
11:00	5	2,232	537	32	143	9	0	24	82	0	0	0	0	3,064
12:00	12	2,629	627	21	146	13	0	29	96	0	0	0	0	3,573
13:00	4	2,093	557	32	107	10	0	23	82	0	0	0	0	2,908
14:00	2	2,137	590	42	156	5	0	30	74	0	0	0	0	3,036
15:00	5	2,669	713	17	146	6	2	39	64	0	0	0	0	3,661
16:00	7	2,915	650	28	147	10	0	50	53	0	0	0	0	3,860
17:00	6	3,113	596	19	105	2	0	28	55	0	0	0	0	3,924
18:00	7	2,377	477	13	67	1	0	15	56	0	0	0	0	3,013
19:00	5	1,567	362	7	59	1	0	8	54	0	0	0	0	2,063
20:00	0	1,214	241	4	39	1	0	15	47	0	0	0	0	1,561
21:00	0	830	160	4	15	0	0	3	37	0	0	0	0	1,049
22:00	1	605	93	4	4	0	0	3	21	0	0	0	0	731
23:00	0	412	55	1	4	0	0	9	34	0	0	0	0	515
Total:	72	37,450	8,818	378	1,917	98	6	445	1,293	0	0	0	0	50,477
Percentage:	0.14%	74.19%	17.47%	0.75%	3.80%	0.19%	0.01%	0.88%	2.56%	0.00%	0.00%	0.00%	0.00%	100.00%
Total:	46,340			378	3,759									50,477
Percentage:	91.80%			0.75%	7.45%									100.00%

Multilane Highway Analyses - Existing (2012)

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2012
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Eastbound

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications													
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**Driver Population Factor (f_p)**	**Peak Hour Factor (PHF)**	**% Heavy Vehicles**	**Heavy Vehicle Adjustment Factor (f_{HV})**	**PCE Flow Rate (v_p) (pc/h/ln)**	**Average Passenger Car Speed (mph)**	**Density (pc/mi/ln)**	**LOS**
12:00 AM	70	67	0	0	3	67	0	3	0	0	0.31%	1.00	0.90	4.29%	0.940	41	45.0	0.9	A
1:00 AM	33	29	0	0	4	29	0	4	0	0	0.14%	1.00	0.90	12.12%	0.846	22	45.0	0.5	A
2:00 AM	25	21	0	0	4	21	0	4	0	0	0.11%	1.00	0.90	16.00%	0.806	17	45.0	0.4	A
3:00 AM	34	29	0	0	5	29	0	5	0	0	0.15%	1.00	0.90	14.71%	0.819	23	45.0	0.5	A
4:00 AM	72	62	0	2	8	62	2	8	0	0	0.32%	1.00	0.90	13.89%	0.828	48	45.0	1.1	A
5:00 AM	335	312	1	10	12	312	11	12	0	0	1.47%	1.00	0.90	6.87%	0.907	205	45.0	4.6	A
6:00 AM	1,044	980	12	31	21	979	35	21	8	1	4.57%	1.00	0.90	6.13%	0.916	633	41.5	14.1	B
7:00 AM	1,240	1,177	14	28	21	1,176	31	21	11	1	5.43%	1.00	0.90	5.08%	0.929	741	38.0	16.5	B
8:00 AM	1,001	930	8	31	32	928	34	32	5	2	4.38%	1.00	0.90	7.09%	0.904	615	41.5	13.7	B
9:00 AM	601	533	9	31	28	532	34	28	6	1	2.63%	1.00	0.90	11.31%	0.855	391	45.0	8.7	A
10:00 AM	540	476	9	24	31	476	27	31	6	0	2.36%	1.00	0.90	11.85%	0.849	353	45.0	7.9	A
11:00 AM	588	531	7	22	28	531	24	28	5	0	2.58%	1.00	0.90	9.69%	0.873	374	45.0	8.3	A
12:00 PM	826	768	6	22	30	763	25	30	3	5	3.62%	1.00	0.90	7.02%	0.905	507	45.0	11.3	B
1:00 PM	665	616	9	16	24	616	18	24	7	0	2.91%	1.00	0.90	7.37%	0.900	410	45.0	9.1	A
2:00 PM	623	567	8	24	24	566	27	24	5	1	2.73%	1.00	0.90	8.99%	0.881	393	45.0	8.7	A
3:00 PM	688	638	4	22	24	637	24	24	2	1	3.01%	1.00	0.90	7.27%	0.902	424	45.0	9.4	A
4:00 PM	661	619	6	17	19	619	19	19	4	0	2.89%	1.00	0.90	6.35%	0.913	402	43.1	8.9	A
5:00 PM	686	654	4	14	14	653	16	14	2	1	3.00%	1.00	0.90	4.66%	0.935	408	41.3	9.1	A
6:00 PM	568	545	3	10	10	544	11	10	2	1	2.49%	1.00	0.90	4.05%	0.943	335	43.1	7.4	A
7:00 PM	460	438	2	10	10	438	11	10	1	0	2.01%	1.00	0.90	4.78%	0.933	274	45.0	6.1	A
8:00 PM	379	362	1	4	12	362	4	12	1	0	1.66%	1.00	0.90	4.49%	0.937	225	45.0	5.0	A
9:00 PM	270	263	0	2	5	263	2	5	0	0	1.18%	1.00	0.90	2.59%	0.963	156	45.0	3.5	A
10:00 PM	184	179	0	1	4	179	1	4	0	0	0.81%	1.00	0.90	2.72%	0.961	106	45.0	2.4	A
11:00 PM	122	117	0	0	5	117	0	5	0	0	0.55%	1.00	0.90	4.10%	0.942	72	45.0	1.6	A
Total	11,715	10,913	103	321	378	10,899	356	378	68	14	51.31%			6.85%					
Percentage	100.00%	93.15%	0.88%	2.74%	3.23%	93.03%	3.04%	3.23%	0.58%	0.12%									

Enter data in highlighted cells only.

Enter ADT or Growth Rate	
Existing (2012) ADT	
Growth Rate	0.00%

Site Input Data	
Terrain	Rolling
Facility Type	Multilane Highway

Eastbound Input Data	
Free Flow Speed	45
Travel Lanes	2

Westbound Input Data	
Free Flow Speed	45
Travel Lanes	2

Multilane Highway Analyses - Existing (2012)

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2012
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Westbound

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications													
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**Driver Population Factor (f_p)**	**Peak Hour Factor (PHF)**	**% Heavy Vehicles**	**Heavy Vehicle Adjustment Factor (f_{HV})**	**PCE Flow Rate (v_p) (pc/h/ln)**	**Average Passenger Car Speed (mph)**	**Density (pc/mi/ln)**	**LOS**
12:00 AM	56	43	0	1	12	43	1	12	0	0	0.25%	1.00	0.90	23.21%	0.742	42	45.0	0.9	A
1:00 AM	47	30	0	0	17	29	0	17	0	1	0.21%	1.00	0.90	36.17%	0.648	40	45.0	0.9	A
2:00 AM	32	18	1	0	13	18	0	13	1	0	0.14%	1.00	0.90	43.75%	0.604	29	45.0	0.7	A
3:00 AM	44	32	0	2	10	32	2	10	0	0	0.19%	1.00	0.90	27.27%	0.710	34	45.0	0.8	A
4:00 AM	92	78	1	2	11	78	2	11	1	0	0.40%	1.00	0.90	15.22%	0.814	63	45.0	1.4	A
5:00 AM	212	187	5	8	12	187	9	12	4	0	0.93%	1.00	0.90	11.79%	0.850	139	45.0	3.1	A
6:00 AM	357	317	5	24	11	316	27	11	2	1	1.56%	1.00	0.90	11.20%	0.856	232	45.0	5.1	A
7:00 AM	494	448	6	22	18	448	25	18	3	0	2.16%	1.00	0.90	9.31%	0.877	313	43.1	7.0	A
8:00 AM	524	462	13	30	19	462	33	19	10	0	2.29%	1.00	0.90	11.83%	0.849	343	41.2	7.6	A
9:00 AM	529	463	9	33	24	463	37	24	5	0	2.32%	1.00	0.90	12.48%	0.842	349	43.1	7.8	A
10:00 AM	541	469	10	39	23	469	43	23	6	0	2.37%	1.00	0.90	13.31%	0.834	361	45.0	8.0	A
11:00 AM	798	724	14	36	24	722	40	24	10	2	3.49%	1.00	0.90	9.27%	0.878	505	45.0	11.2	B
12:00 PM	790	711	10	37	32	711	41	32	6	0	3.46%	1.00	0.90	10.00%	0.870	505	45.0	11.2	B
1:00 PM	650	584	11	27	28	583	30	28	8	1	2.85%	1.00	0.90	10.15%	0.868	416	45.0	9.2	A
2:00 PM	750	667	18	39	26	667	43	26	14	0	3.28%	1.00	0.90	11.07%	0.858	486	45.0	10.8	A
3:00 PM	969	895	10	38	26	894	42	26	6	1	4.24%	1.00	0.90	7.64%	0.897	600	45.0	13.3	B
4:00 PM	1,087	998	14	43	32	995	48	32	9	3	4.76%	1.00	0.90	8.19%	0.891	678	41.6	15.1	B
5:00 PM	1,090	1,027	10	28	25	1,025	31	25	7	2	4.77%	1.00	0.90	5.78%	0.920	658	38.3	14.6	B
6:00 PM	794	749	6	17	22	747	19	22	4	2	3.48%	1.00	0.90	5.67%	0.922	479	41.6	10.6	A
7:00 PM	474	437	4	14	19	435	16	19	2	2	2.08%	1.00	0.90	7.81%	0.895	294	45.0	6.5	A
8:00 PM	327	297	2	12	16	297	13	16	1	0	1.43%	1.00	0.90	9.17%	0.879	207	45.0	4.6	A
9:00 PM	205	185	3	4	13	185	5	13	2	0	0.90%	1.00	0.90	9.76%	0.872	131	45.0	2.9	A
10:00 PM	147	137	2	1	7	137	1	7	2	0	0.64%	1.00	0.90	6.80%	0.907	90	45.0	2.0	A
11:00 PM	110	93	0	2	15	93	2	15	0	0	0.49%	1.00	0.90	15.45%	0.812	75	45.0	1.7	A
Total	11,119	10,051	154	459	455	10,036	510	455	103	15	48.69%			9.61%					
Percentage	100.00%	90.89%	1.31%	3.92%	3.88%	90.76%	4.35%	3.88%	0.88%	0.13%									

Eastbound

LOS C/D Breakpoint	
Volume (veh/hr)	1,875
Average Speed (mph)	45.0

LOS D/E Breakpoint	
Volume (veh/hr)	2,491
Average Speed (mph)	44.4

LOS E/F Breakpoint	
Volume (veh/hr)	3,044
Average Speed (mph)	42.2

Westbound

LOS C/D Breakpoint	
Volume (veh/hr)	1,875
Average Speed (mph)	45.0

LOS D/E Breakpoint	
Volume (veh/hr)	2,491
Average Speed (mph)	44.4

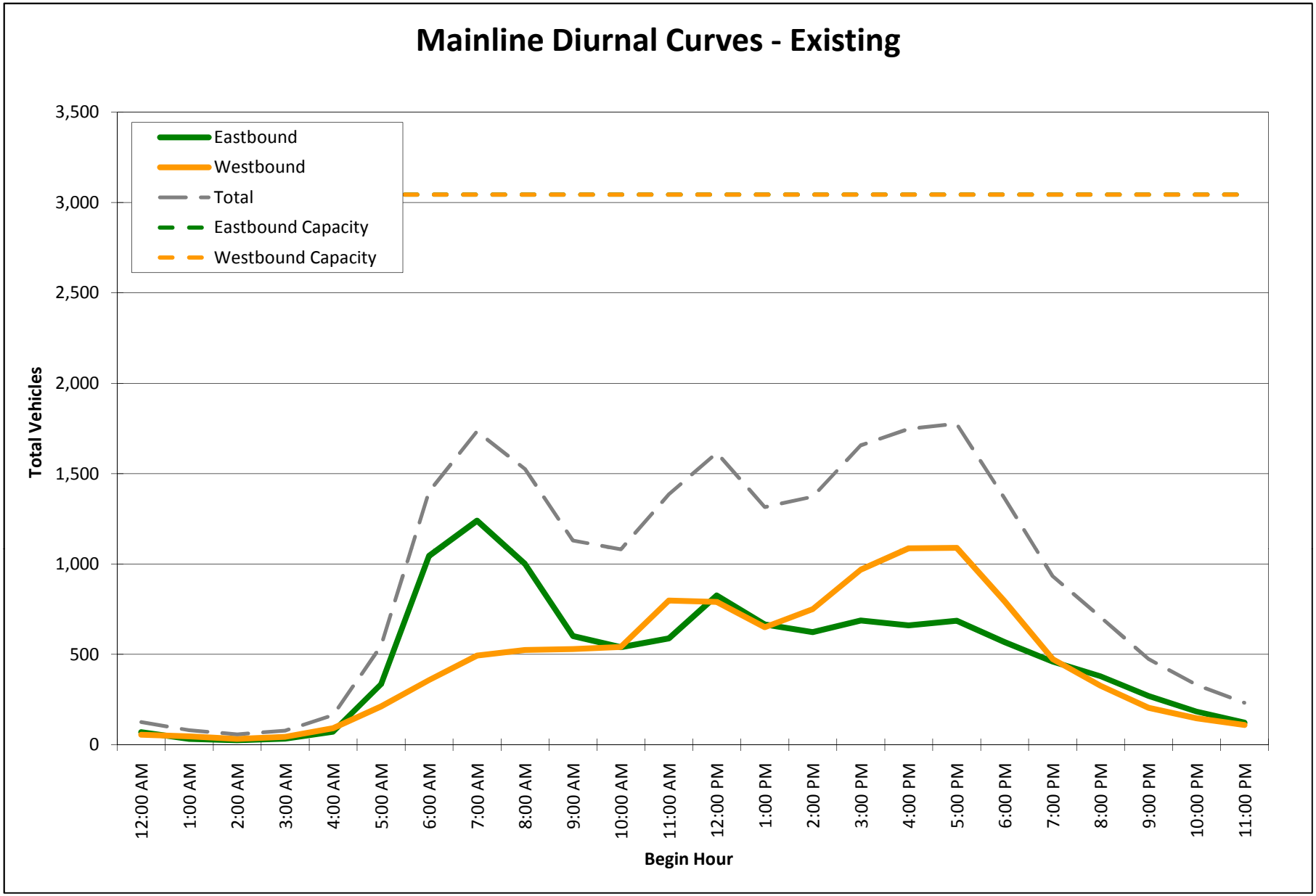
LOS E/F Breakpoint	
Volume (veh/hr)	3,044
Average Speed (mph)	42.2

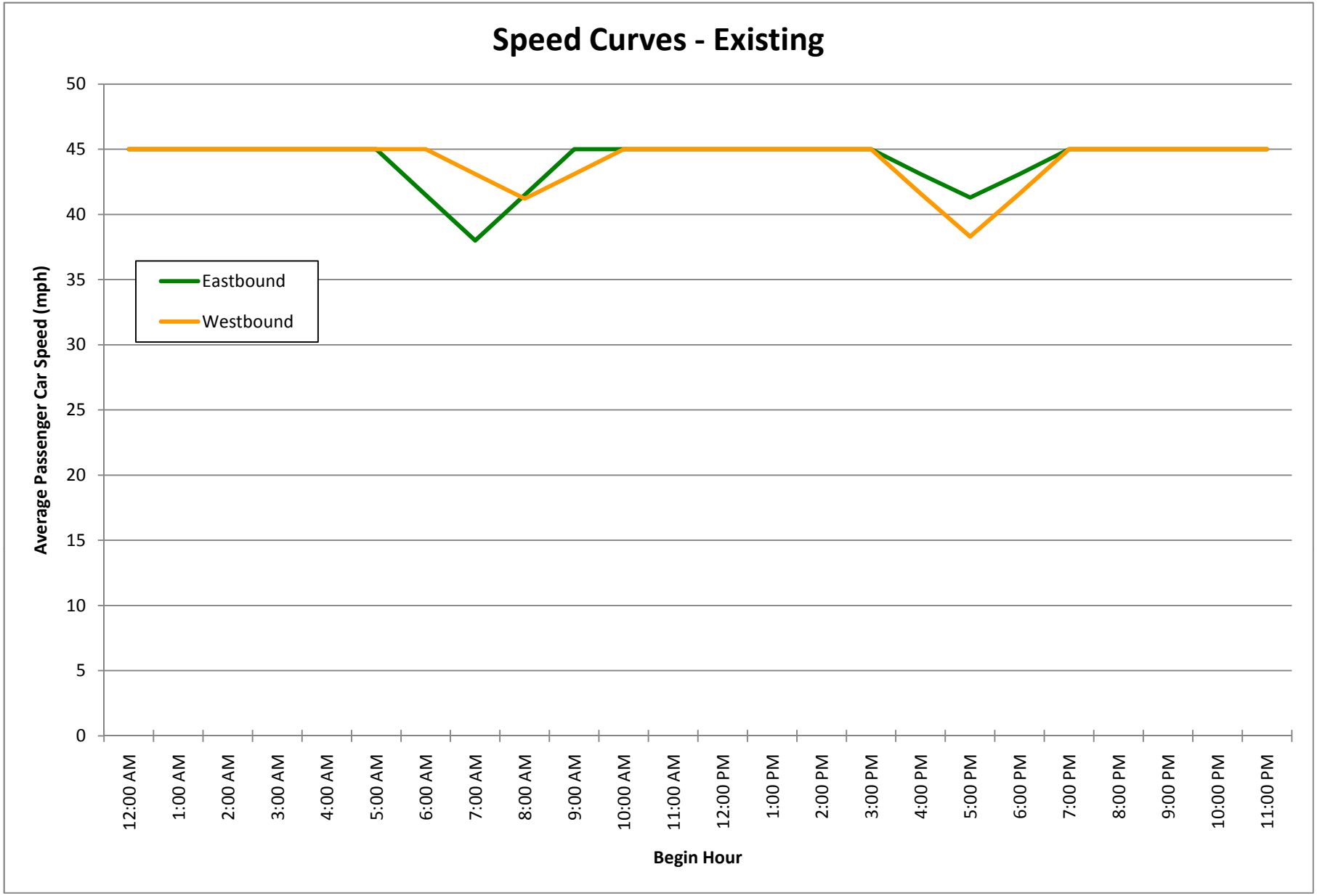
Multilane Highway Analyses - Existing (2012)

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2012
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Total

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications							
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**% Heavy Vehicles**	
12:00 AM	126	110	0	1	15	110	1	15	0	0	0.55%	12.70%	
1:00 AM	80	59	0	0	21	58	0	21	0	1	0.35%	26.25%	
2:00 AM	57	39	1	0	17	39	0	17	1	0	0.25%	31.58%	
3:00 AM	78	61	0	2	15	61	2	15	0	0	0.34%	21.79%	
4:00 AM	164	140	1	4	19	140	4	19	1	0	0.72%	14.63%	
5:00 AM	547	499	6	18	24	499	20	24	4	0	2.40%	8.78%	
6:00 AM	1,401	1,297	17	55	32	1,295	62	32	10	2	6.14%	7.42%	
7:00 AM	1,734	1,625	20	50	39	1,624	56	39	14	1	7.59%	6.29%	
8:00 AM	1,525	1,392	21	61	51	1,390	67	51	15	2	6.68%	8.72%	
9:00 AM	1,130	996	18	64	52	995	71	52	11	1	4.95%	11.86%	
10:00 AM	1,081	945	19	63	54	945	70	54	12	0	4.73%	12.58%	
11:00 AM	1,386	1,255	21	58	52	1,253	64	52	15	2	6.07%	9.45%	
12:00 PM	1,616	1,479	16	59	62	1,474	66	62	9	5	7.08%	8.48%	Estimated Loudest Hour
1:00 PM	1,315	1,200	20	43	52	1,199	48	52	15	1	5.76%	8.75%	
2:00 PM	1,373	1,234	26	63	50	1,233	70	50	19	1	6.01%	10.12%	
3:00 PM	1,657	1,533	14	60	50	1,531	66	50	8	2	7.26%	7.48%	
4:00 PM	1,748	1,617	20	60	51	1,614	67	51	13	3	7.66%	7.49%	
5:00 PM	1,776	1,681	14	42	39	1,678	47	39	9	3	7.78%	5.35%	Peak Hour
6:00 PM	1,362	1,294	9	27	32	1,291	30	32	6	3	5.96%	4.99%	
7:00 PM	934	875	6	24	29	873	27	29	3	2	4.09%	6.32%	
8:00 PM	706	659	3	16	28	659	17	28	2	0	3.09%	6.66%	
9:00 PM	475	448	3	6	18	448	7	18	2	0	2.08%	5.68%	
10:00 PM	331	316	2	2	11	316	2	11	2	0	1.45%	4.53%	
11:00 PM	232	210	0	2	20	210	2	20	0	0	1.01%	9.48%	
Total	22,834	20,964	257	780	833	20,935	866	833	171	29	100.00%	8.19%	
Percentage	100.00%	91.80%	1.13%	3.42%	3.65%	91.68%	3.79%	3.65%	0.75%	0.13%			
Peak Hour	1,776	1,681	14	42	39	1,678	47	39	9	3			
Percentage	100.00%	94.65%	0.79%	2.36%	2.20%	94.47%	2.65%	2.20%	0.51%	0.17%			


Mainline Diurnal Curves - Existing
Eastbound
Westbound
Total
Eastbound Capacity
Westbound Capacity
Total Vehicles
3,500
3,000
2,500
2,000
1,500
1,000
500
0
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM
Begin Hour


Speed Curves - Existing
Average Passenger Car Speed (mph)
50
45
40
35
30
25
20
15
10
5
0
Eastbound
Westbound
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM
Begin Hour

Multilane Highway Analyses - Intermediate Year (2015) - No Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2015
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Eastbound

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications													
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**Driver Population Factor (f_p)**	**Peak Hour Factor (PHF)**	**% Heavy Vehicles**	**Heavy Vehicle Adjustment Factor (f_{HV})**	**PCE Flow Rate (v_p) (pc/h/ln)**	**Average Passenger Car Speed (mph)**	**Density (pc/mi/ln)**	**LOS**
12:00 AM	135	129	0	0	6	129	0	6	0	0	0.31%	1.00	0.90	4.44%	0.938	80	45.0	1.8	A
1:00 AM	63	55	0	0	8	55	0	8	0	0	0.14%	1.00	0.90	12.70%	0.840	42	45.0	0.9	A
2:00 AM	48	40	0	0	8	40	0	8	0	0	0.11%	1.00	0.90	16.67%	0.800	33	45.0	0.7	A
3:00 AM	65	55	0	0	10	55	0	10	0	0	0.15%	1.00	0.90	15.38%	0.813	44	45.0	1.0	A
4:00 AM	138	119	0	4	15	119	4	15	0	0	0.31%	1.00	0.90	13.77%	0.829	93	45.0	2.1	A
5:00 AM	644	600	2	19	23	600	21	23	0	0	1.47%	1.00	0.90	6.83%	0.907	394	45.0	8.8	A
6:00 AM	2,008	1,886	22	60	40	1,884	67	40	15	2	4.57%	1.00	0.90	6.08%	0.916	1,217	35.7	27.0	D
7:00 AM	2,385	2,264	27	54	40	2,262	60	40	21	2	5.43%	1.00	0.90	5.07%	0.929	1,426	26.5	31.7	D
8:00 AM	1,925	1,788	17	58	62	1,784	65	62	10	4	4.38%	1.00	0.90	7.12%	0.904	1,184	35.7	26.3	D
9:00 AM	1,156	1,025	19	58	54	1,023	65	54	12	2	2.63%	1.00	0.90	11.33%	0.855	751	45.0	16.7	B
10:00 AM	1,038	914	17	47	60	914	52	60	12	0	2.36%	1.00	0.90	11.95%	0.848	680	45.0	15.1	B
11:00 AM	1,131	1,021	15	41	54	1,021	46	54	10	0	2.58%	1.00	0.90	9.73%	0.873	720	45.0	16.0	B
12:00 PM	1,588	1,476	11	43	58	1,466	48	58	6	10	3.62%	1.00	0.90	7.05%	0.904	976	45.0	21.7	C
1:00 PM	1,279	1,185	17	31	46	1,185	35	46	13	0	2.91%	1.00	0.90	7.35%	0.901	789	45.0	17.5	B
2:00 PM	1,198	1,090	15	47	46	1,088	52	46	10	2	2.73%	1.00	0.90	9.02%	0.881	756	45.0	16.8	B
3:00 PM	1,323	1,227	9	41	46	1,225	46	46	4	2	3.01%	1.00	0.90	7.26%	0.902	815	45.0	18.1	C
4:00 PM	1,271	1,189	12	33	37	1,189	37	37	8	0	2.89%	1.00	0.90	6.45%	0.912	774	42.1	17.2	B
5:00 PM	1,319	1,257	7	28	27	1,255	31	27	4	2	3.00%	1.00	0.90	4.70%	0.934	784	39.1	17.4	B
6:00 PM	1,092	1,048	6	19	19	1,046	21	19	4	2	2.49%	1.00	0.90	4.03%	0.943	643	42.1	14.3	B
7:00 PM	885	843	4	19	19	843	21	19	2	0	2.02%	1.00	0.90	4.75%	0.934	527	45.0	11.7	B
8:00 PM	729	696	3	7	23	696	8	23	2	0	1.66%	1.00	0.90	4.53%	0.936	433	45.0	9.6	A
9:00 PM	519	505	0	4	10	505	4	10	0	0	1.18%	1.00	0.90	2.70%	0.961	300	45.0	6.7	A
10:00 PM	354	344	0	2	8	344	2	8	0	0	0.81%	1.00	0.90	2.82%	0.959	205	45.0	4.6	A
11:00 PM	235	225	0	0	10	225	0	10	0	0	0.54%	1.00	0.90	4.26%	0.940	139	45.0	3.1	A
Total	22,528	20,981	203	615	729	20,953	685	729	133	28	51.30%			6.87%					
Percentage	100.00%	93.13%	0.90%	2.73%	3.24%	93.01%	3.04%	3.24%	0.59%	0.12%									

Enter data in highlighted cells only.

Enter ADT or Growth Rate	
2015 No Build ADT	43,910
Growth Rate	

Site Input Data	
Terrain	Rolling
Facility Type	Multilane Highway

Eastbound Input Data	
Free Flow Speed	45
Travel Lanes	2

Westbound Input Data	
Free Flow Speed	45
Travel Lanes	2

Multilane Highway Analyses - Intermediate Year (2015) - No Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2015
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Westbound

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications													
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**Driver Population Factor (f_p)**	**Peak Hour Factor (PHF)**	**% Heavy Vehicles**	**Heavy Vehicle Adjustment Factor (f_{HV})**	**PCE Flow Rate (v_p) (pc/h/ln)**	**Average Passenger Car Speed (mph)**	**Density (pc/mi/ln)**	**LOS**
12:00 AM	108	83	0	2	23	83	2	23	0	0	0.25%	1.00	0.90	23.15%	0.742	81	45.0	1.8	A
1:00 AM	90	57	0	0	33	55	0	33	0	2	0.20%	1.00	0.90	36.67%	0.645	78	45.0	1.7	A
2:00 AM	62	35	2	0	25	35	0	25	2	0	0.14%	1.00	0.90	43.55%	0.605	57	45.0	1.3	A
3:00 AM	85	62	0	4	19	62	4	19	0	0	0.19%	1.00	0.90	27.06%	0.711	66	45.0	1.5	A
4:00 AM	177	150	2	4	21	150	4	21	2	0	0.40%	1.00	0.90	15.25%	0.814	121	45.0	2.7	A
5:00 AM	408	360	10	15	23	360	17	23	8	0	0.93%	1.00	0.90	11.76%	0.850	267	45.0	5.9	A
6:00 AM	687	610	9	47	21	608	52	21	4	2	1.56%	1.00	0.90	11.21%	0.856	446	45.0	9.9	A
7:00 AM	950	861	11	43	35	861	48	35	6	0	2.16%	1.00	0.90	9.37%	0.877	602	42.7	13.4	B
8:00 AM	1,008	889	25	57	37	889	63	37	19	0	2.30%	1.00	0.90	11.81%	0.850	659	40.4	14.6	B
9:00 AM	1,017	890	17	64	46	890	71	46	10	0	2.32%	1.00	0.90	12.49%	0.842	671	42.7	14.9	B
10:00 AM	1,040	901	20	75	44	901	83	44	12	0	2.37%	1.00	0.90	13.37%	0.833	694	45.0	15.4	B
11:00 AM	1,535	1,393	27	69	46	1,389	77	46	19	4	3.50%	1.00	0.90	9.25%	0.878	971	45.0	21.6	C
12:00 PM	1,519	1,366	20	71	62	1,366	79	62	12	0	3.46%	1.00	0.90	10.07%	0.869	971	45.0	21.6	C
1:00 PM	1,250	1,123	21	52	54	1,121	58	54	15	2	2.85%	1.00	0.90	10.16%	0.868	800	45.0	17.8	B
2:00 PM	1,442	1,282	35	75	50	1,282	83	50	27	0	3.28%	1.00	0.90	11.10%	0.857	934	45.0	20.8	C
3:00 PM	1,863	1,720	20	73	50	1,718	81	50	12	2	4.24%	1.00	0.90	7.68%	0.897	1,154	45.0	25.6	C
4:00 PM	2,090	1,919	26	83	62	1,913	92	62	17	6	4.76%	1.00	0.90	8.18%	0.891	1,304	37.8	29.0	D
5:00 PM	2,096	1,975	19	54	48	1,971	60	48	13	4	4.77%	1.00	0.90	5.77%	0.920	1,265	30.7	28.1	D
6:00 PM	1,527	1,440	12	33	42	1,436	37	42	8	4	3.48%	1.00	0.90	5.70%	0.921	921	37.8	20.5	C
7:00 PM	912	840	7	28	37	836	31	37	4	4	2.08%	1.00	0.90	7.89%	0.894	567	45.0	12.6	B
8:00 PM	629	571	5	22	31	571	25	31	2	0	1.43%	1.00	0.90	9.22%	0.878	398	45.0	8.8	A
9:00 PM	394	355	5	9	25	355	10	25	4	0	0.90%	1.00	0.90	9.90%	0.871	251	45.0	5.6	A
10:00 PM	283	264	4	2	13	264	2	13	4	0	0.64%	1.00	0.90	6.71%	0.909	173	45.0	3.8	A
11:00 PM	212	179	0	4	29	179	4	29	0	0	0.49%	1.00	0.90	15.57%	0.811	145	45.0	3.2	A
Total	21,384	19,325	297	886	876	19,295	983	876	200	30	48.70%			9.63%					
Percentage	100.00%	90.86%	1.32%	3.93%	3.89%	90.73%	4.36%	3.89%	0.89%	0.13%									

Eastbound

LOS C/D Breakpoint	
Volume (veh/hr)	1,875
Average Speed (mph)	45.0

LOS D/E Breakpoint	
Volume (veh/hr)	2,490
Average Speed (mph)	44.4

LOS E/F Breakpoint	
Volume (veh/hr)	3,043
Average Speed (mph)	42.2

Westbound

LOS C/D Breakpoint	
Volume (veh/hr)	1,875
Average Speed (mph)	45.0

LOS D/E Breakpoint	
Volume (veh/hr)	2,490
Average Speed (mph)	44.4

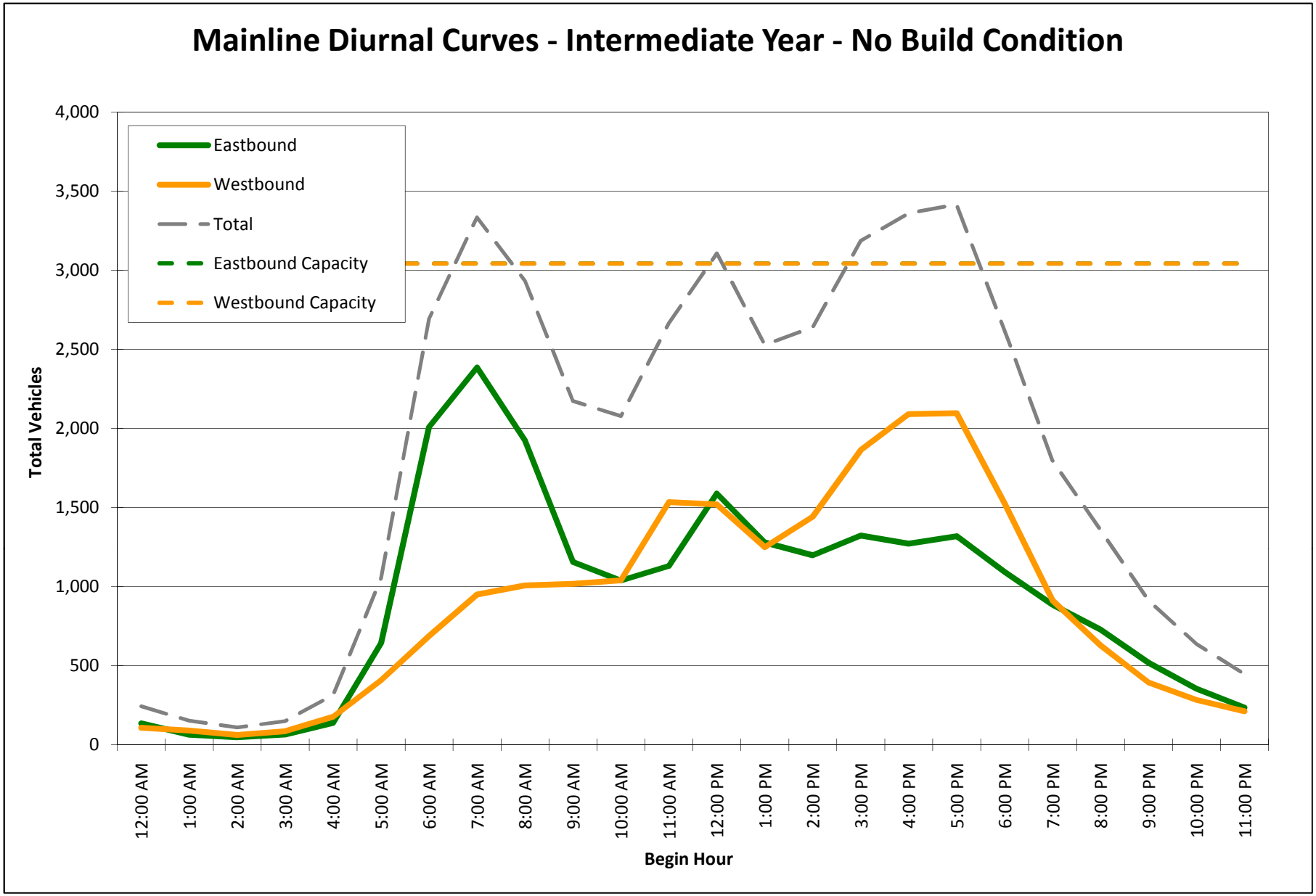
LOS E/F Breakpoint	
Volume (veh/hr)	3,043
Average Speed (mph)	42.2

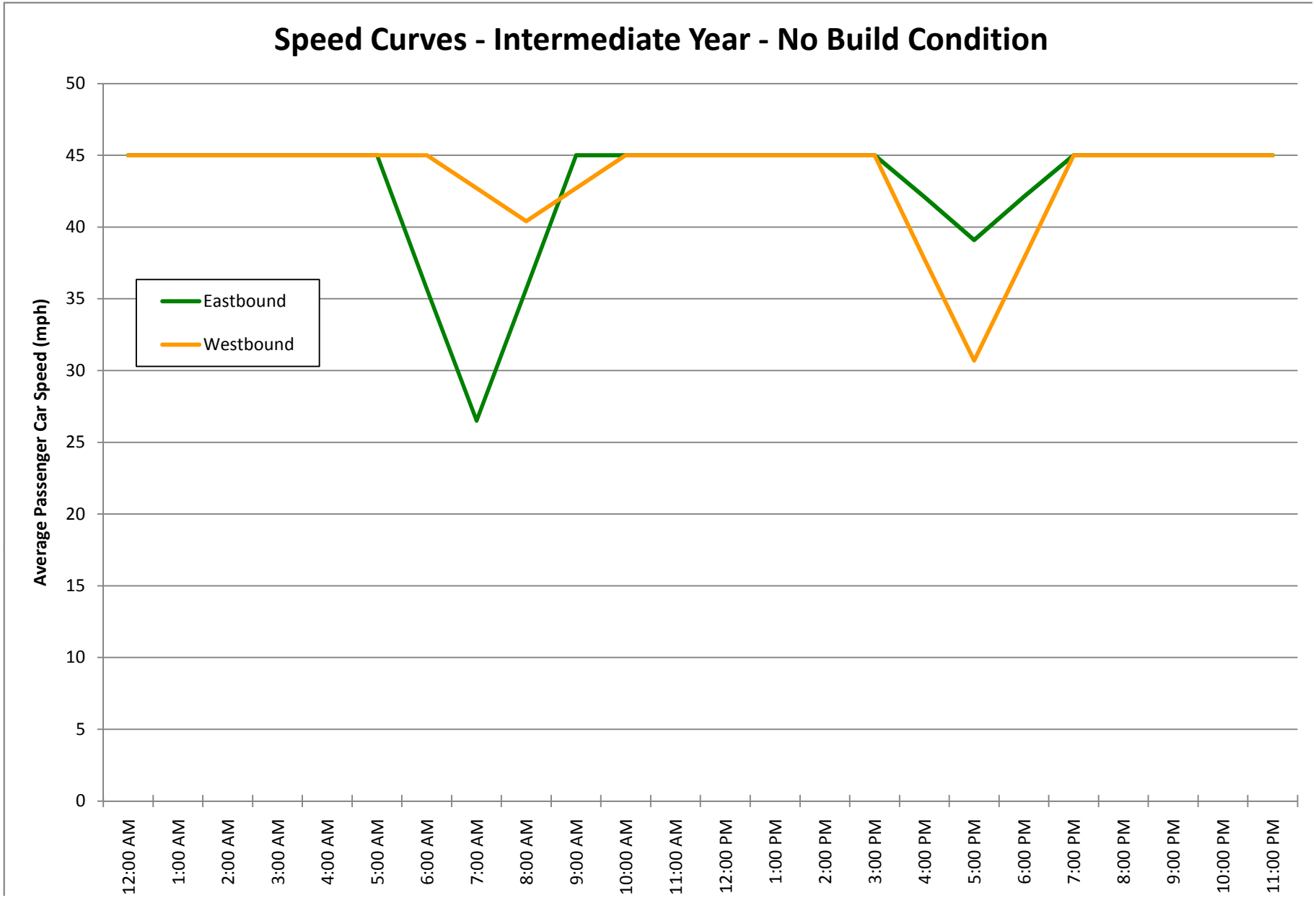
Multilane Highway Analyses - Intermediate Year (2015) - No Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2015
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Total

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications							
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**% Heavy Vehicles**	
12:00 AM	243	212	0	2	29	212	2	29	0	0	0.55%	12.76%	
1:00 AM	153	112	0	0	41	110	0	41	0	2	0.35%	26.80%	
2:00 AM	110	75	2	0	33	75	0	33	2	0	0.25%	31.82%	
3:00 AM	150	117	0	4	29	117	4	29	0	0	0.34%	22.00%	
4:00 AM	315	269	2	8	36	269	8	36	2	0	0.72%	14.60%	
5:00 AM	1,052	960	12	34	46	960	38	46	8	0	2.40%	8.75%	
6:00 AM	2,695	2,496	31	107	61	2,492	119	61	19	4	6.14%	7.38%	
7:00 AM	3,335	3,125	38	97	75	3,123	108	75	27	2	7.59%	6.30%	
8:00 AM	2,933	2,677	42	115	99	2,673	128	99	29	4	6.68%	8.73%	
9:00 AM	2,173	1,915	36	122	100	1,913	136	100	22	2	4.95%	11.87%	
10:00 AM	2,078	1,815	37	122	104	1,815	135	104	24	0	4.73%	12.66%	
11:00 AM	2,666	2,414	42	110	100	2,410	123	100	29	4	6.07%	9.45%	
12:00 PM	3,107	2,842	31	114	120	2,832	127	120	18	10	7.08%	8.53%	Estimated Loudest Hour
1:00 PM	2,529	2,308	38	83	100	2,306	93	100	28	2	5.76%	8.74%	
2:00 PM	2,640	2,372	50	122	96	2,370	135	96	37	2	6.01%	10.15%	
3:00 PM	3,186	2,947	29	114	96	2,943	127	96	16	4	7.26%	7.50%	
4:00 PM	3,361	3,108	38	116	99	3,102	129	99	25	6	7.65%	7.53%	
5:00 PM	3,415	3,232	26	82	75	3,226	91	75	17	6	7.78%	5.36%	Peak Hour
6:00 PM	2,619	2,488	18	52	61	2,482	58	61	12	6	5.96%	5.00%	
7:00 PM	1,797	1,683	11	47	56	1,679	52	56	6	4	4.09%	6.34%	
8:00 PM	1,358	1,267	8	29	54	1,267	33	54	4	0	3.09%	6.70%	
9:00 PM	913	860	5	13	35	860	14	35	4	0	2.08%	5.81%	
10:00 PM	637	608	4	4	21	608	4	21	4	0	1.45%	4.55%	
11:00 PM	447	404	0	4	39	404	4	39	0	0	1.02%	9.62%	
Total	43,912	40,306	500	1,501	1,605	40,248	1,668	1,605	333	58	100.00%	8.21%	
Percentage	100.00%	91.78%	1.14%	3.42%	3.66%	91.65%	3.80%	3.66%	0.76%	0.13%			
Peak Hour	3,415	3,232	26	82	75	3,226	91	75	17	6			
Percentage	100.00%	94.64%	0.76%	2.40%	2.20%	94.46%	2.66%	2.20%	0.50%	0.18%			


Mainline Diurnal Curves - Intermediate Year - No Build Condition
Eastbound
Westbound
Total
Eastbound Capacity
Westbound Capacity
Total Vehicles
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM
Begin Hour


Speed Curves - Intermediate Year - No Build Condition
Average Passenger Car Speed (mph)
50
45
40
35
30
25
20
15
10
5
0
Eastbound
Westbound
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM

Multilane Highway Analyses - Intermediate Year (2015) - Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2015
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Eastbound

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications													
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**Driver Population Factor (f_p)**	**Peak Hour Factor (PHF)**	**% Heavy Vehicles**	**Heavy Vehicle Adjustment Factor (f_{HV})**	**PCE Flow Rate (v_p) (pc/h/ln)**	**Average Passenger Car Speed (mph)**	**Density (pc/mi/ln)**	**LOS**
12:00 AM	135	129	0	0	6	129	0	6	0	0	0.31%	1.00	0.90	4.44%	0.938	53	45.0	1.2	A
1:00 AM	63	55	0	0	8	55	0	8	0	0	0.14%	1.00	0.90	12.70%	0.840	28	45.0	0.6	A
2:00 AM	48	40	0	0	8	40	0	8	0	0	0.11%	1.00	0.90	16.67%	0.800	22	45.0	0.5	A
3:00 AM	65	55	0	0	10	55	0	10	0	0	0.15%	1.00	0.90	15.38%	0.813	30	45.0	0.7	A
4:00 AM	138	119	0	4	15	119	4	15	0	0	0.31%	1.00	0.90	13.77%	0.829	62	45.0	1.4	A
5:00 AM	644	600	2	19	23	600	21	23	0	0	1.47%	1.00	0.90	6.83%	0.907	263	45.0	5.8	A
6:00 AM	2,008	1,886	22	60	40	1,884	67	40	15	2	4.57%	1.00	0.90	6.08%	0.916	811	40.3	18.0	C
7:00 AM	2,385	2,264	27	54	40	2,262	60	40	21	2	5.43%	1.00	0.90	5.07%	0.929	951	35.6	21.1	C
8:00 AM	1,925	1,788	17	58	62	1,784	65	62	10	4	4.38%	1.00	0.90	7.12%	0.904	789	40.3	17.5	B
9:00 AM	1,156	1,025	19	58	54	1,023	65	54	12	2	2.63%	1.00	0.90	11.33%	0.855	501	45.0	11.1	B
10:00 AM	1,038	914	17	47	60	914	52	60	12	0	2.36%	1.00	0.90	11.95%	0.848	453	45.0	10.1	A
11:00 AM	1,131	1,021	15	41	54	1,021	46	54	10	0	2.58%	1.00	0.90	9.73%	0.873	480	45.0	10.7	A
12:00 PM	1,588	1,476	11	43	58	1,466	48	58	6	10	3.62%	1.00	0.90	7.05%	0.904	650	45.0	14.5	B
1:00 PM	1,279	1,185	17	31	46	1,185	35	46	13	0	2.91%	1.00	0.90	7.35%	0.901	526	45.0	11.7	B
2:00 PM	1,198	1,090	15	47	46	1,088	52	46	10	2	2.73%	1.00	0.90	9.02%	0.881	504	45.0	11.2	B
3:00 PM	1,323	1,227	9	41	46	1,225	46	46	4	2	3.01%	1.00	0.90	7.26%	0.902	543	45.0	12.1	B
4:00 PM	1,271	1,189	12	33	37	1,189	37	37	8	0	2.89%	1.00	0.90	6.45%	0.912	516	42.8	11.5	B
5:00 PM	1,319	1,257	7	28	27	1,255	31	27	4	2	3.00%	1.00	0.90	4.70%	0.934	523	40.7	11.6	B
6:00 PM	1,092	1,048	6	19	19	1,046	21	19	4	2	2.49%	1.00	0.90	4.03%	0.943	429	42.8	9.5	A
7:00 PM	885	843	4	19	19	843	21	19	2	0	2.02%	1.00	0.90	4.75%	0.934	351	45.0	7.8	A
8:00 PM	729	696	3	7	23	696	8	23	2	0	1.66%	1.00	0.90	4.53%	0.936	288	45.0	6.4	A
9:00 PM	519	505	0	4	10	505	4	10	0	0	1.18%	1.00	0.90	2.70%	0.961	200	45.0	4.4	A
10:00 PM	354	344	0	2	8	344	2	8	0	0	0.81%	1.00	0.90	2.82%	0.959	137	45.0	3.0	A
11:00 PM	235	225	0	0	10	225	0	10	0	0	0.54%	1.00	0.90	4.26%	0.940	93	45.0	2.1	A
Total	22,528	20,981	203	615	729	20,953	685	729	133	28	51.30%			6.87%					
Percentage	100.00%	93.13%	0.90%	2.73%	3.24%	93.01%	3.04%	3.24%	0.59%	0.12%									

Enter data in highlighted cells only.

Enter ADT or Growth Rate	
2015 Build ADT	43,910
Growth Rate	

Site Input Data	
Terrain	Rolling
Facility Type	Multilane Highway

Eastbound Input Data	
Free Flow Speed	45
Travel Lanes	3

Westbound Input Data	
Free Flow Speed	45
Travel Lanes	3

Multilane Highway Analyses - Intermediate Year (2015) - Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2015
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Westbound

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications													
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**Driver Population Factor (f_p)**	**Peak Hour Factor (PHF)**	**% Heavy Vehicles**	**Heavy Vehicle Adjustment Factor (f_{HV})**	**PCE Flow Rate (v_p) (pc/h/ln)**	**Average Passenger Car Speed (mph)**	**Density (pc/mi/ln)**	**LOS**
12:00 AM	108	83	0	2	23	83	2	23	0	0	0.25%	1.00	0.90	23.15%	0.742	54	45.0	1.2	A
1:00 AM	90	57	0	0	33	55	0	33	0	2	0.20%	1.00	0.90	36.67%	0.645	52	45.0	1.1	A
2:00 AM	62	35	2	0	25	35	0	25	2	0	0.14%	1.00	0.90	43.55%	0.605	38	45.0	0.8	A
3:00 AM	85	62	0	4	19	62	4	19	0	0	0.19%	1.00	0.90	27.06%	0.711	44	45.0	1.0	A
4:00 AM	177	150	2	4	21	150	4	21	2	0	0.40%	1.00	0.90	15.25%	0.814	81	45.0	1.8	A
5:00 AM	408	360	10	15	23	360	17	23	8	0	0.93%	1.00	0.90	11.76%	0.850	178	45.0	4.0	A
6:00 AM	687	610	9	47	21	608	52	21	4	2	1.56%	1.00	0.90	11.21%	0.856	297	45.0	6.6	A
7:00 AM	950	861	11	43	35	861	48	35	6	0	2.16%	1.00	0.90	9.37%	0.877	401	42.3	8.9	A
8:00 AM	1,008	889	25	57	37	889	63	37	19	0	2.30%	1.00	0.90	11.81%	0.850	439	39.7	9.8	A
9:00 AM	1,017	890	17	64	46	890	71	46	10	0	2.32%	1.00	0.90	12.49%	0.842	447	42.3	9.9	A
10:00 AM	1,040	901	20	75	44	901	83	44	12	0	2.37%	1.00	0.90	13.37%	0.833	462	45.0	10.3	A
11:00 AM	1,535	1,393	27	69	46	1,389	77	46	19	4	3.50%	1.00	0.90	9.25%	0.878	647	45.0	14.4	B
12:00 PM	1,519	1,366	20	71	62	1,366	79	62	12	0	3.46%	1.00	0.90	10.07%	0.869	648	45.0	14.4	B
1:00 PM	1,250	1,123	21	52	54	1,121	58	54	15	2	2.85%	1.00	0.90	10.16%	0.868	534	45.0	11.9	B
2:00 PM	1,442	1,282	35	75	50	1,282	83	50	27	0	3.28%	1.00	0.90	11.10%	0.857	623	45.0	13.8	B
3:00 PM	1,863	1,720	20	73	50	1,718	81	50	12	2	4.24%	1.00	0.90	7.68%	0.897	769	45.0	17.1	B
4:00 PM	2,090	1,919	26	83	62	1,913	92	62	17	6	4.76%	1.00	0.90	8.18%	0.891	869	39.8	19.3	C
5:00 PM	2,096	1,975	19	54	48	1,971	60	48	13	4	4.77%	1.00	0.90	5.77%	0.920	844	34.6	18.7	C
6:00 PM	1,527	1,440	12	33	42	1,436	37	42	8	4	3.48%	1.00	0.90	5.70%	0.921	614	39.8	13.6	B
7:00 PM	912	840	7	28	37	836	31	37	4	4	2.08%	1.00	0.90	7.89%	0.894	378	45.0	8.4	A
8:00 PM	629	571	5	22	31	571	25	31	2	0	1.43%	1.00	0.90	9.22%	0.878	265	45.0	5.9	A
9:00 PM	394	355	5	9	25	355	10	25	4	0	0.90%	1.00	0.90	9.90%	0.871	168	45.0	3.7	A
10:00 PM	283	264	4	2	13	264	2	13	4	0	0.64%	1.00	0.90	6.71%	0.909	115	45.0	2.6	A
11:00 PM	212	179	0	4	29	179	4	29	0	0	0.49%	1.00	0.90	15.57%	0.811	97	45.0	2.2	A
Total	21,384	19,325	297	886	876	19,295	983	876	200	30	48.70%			9.63%					
Percentage	100.00%	90.86%	1.32%	3.93%	3.89%	90.73%	4.36%	3.89%	0.89%	0.13%									

Eastbound

LOS C/D Breakpoint	
Volume (veh/hr)	2,812
Average Speed (mph)	45.0

LOS D/E Breakpoint	
Volume (veh/hr)	3,735
Average Speed (mph)	44.4

LOS E/F Breakpoint	
Volume (veh/hr)	4,564
Average Speed (mph)	42.2

Westbound

LOS C/D Breakpoint	
Volume (veh/hr)	2,812
Average Speed (mph)	45.0

LOS D/E Breakpoint	
Volume (veh/hr)	3,735
Average Speed (mph)	44.4

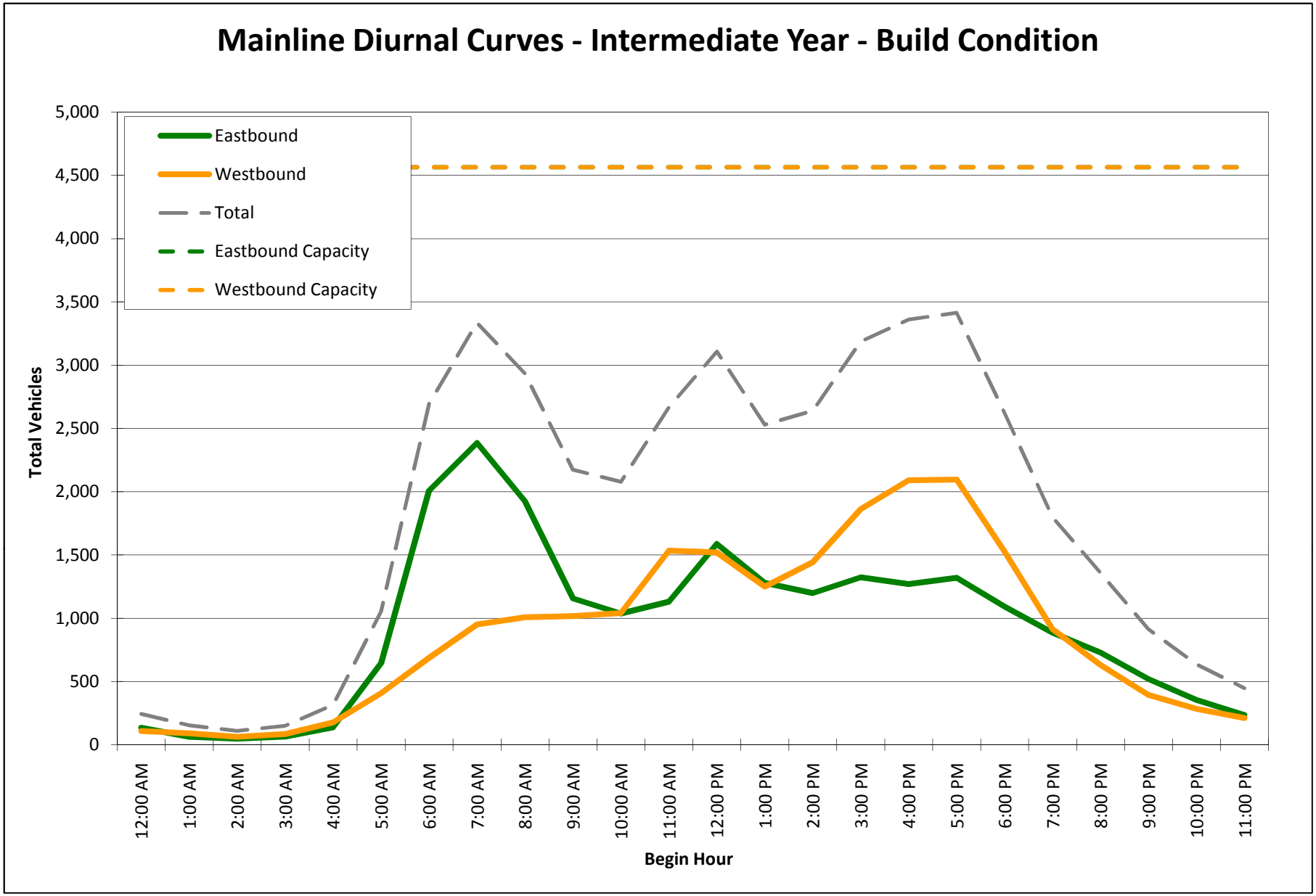
LOS E/F Breakpoint	
Volume (veh/hr)	4,564
Average Speed (mph)	42.2

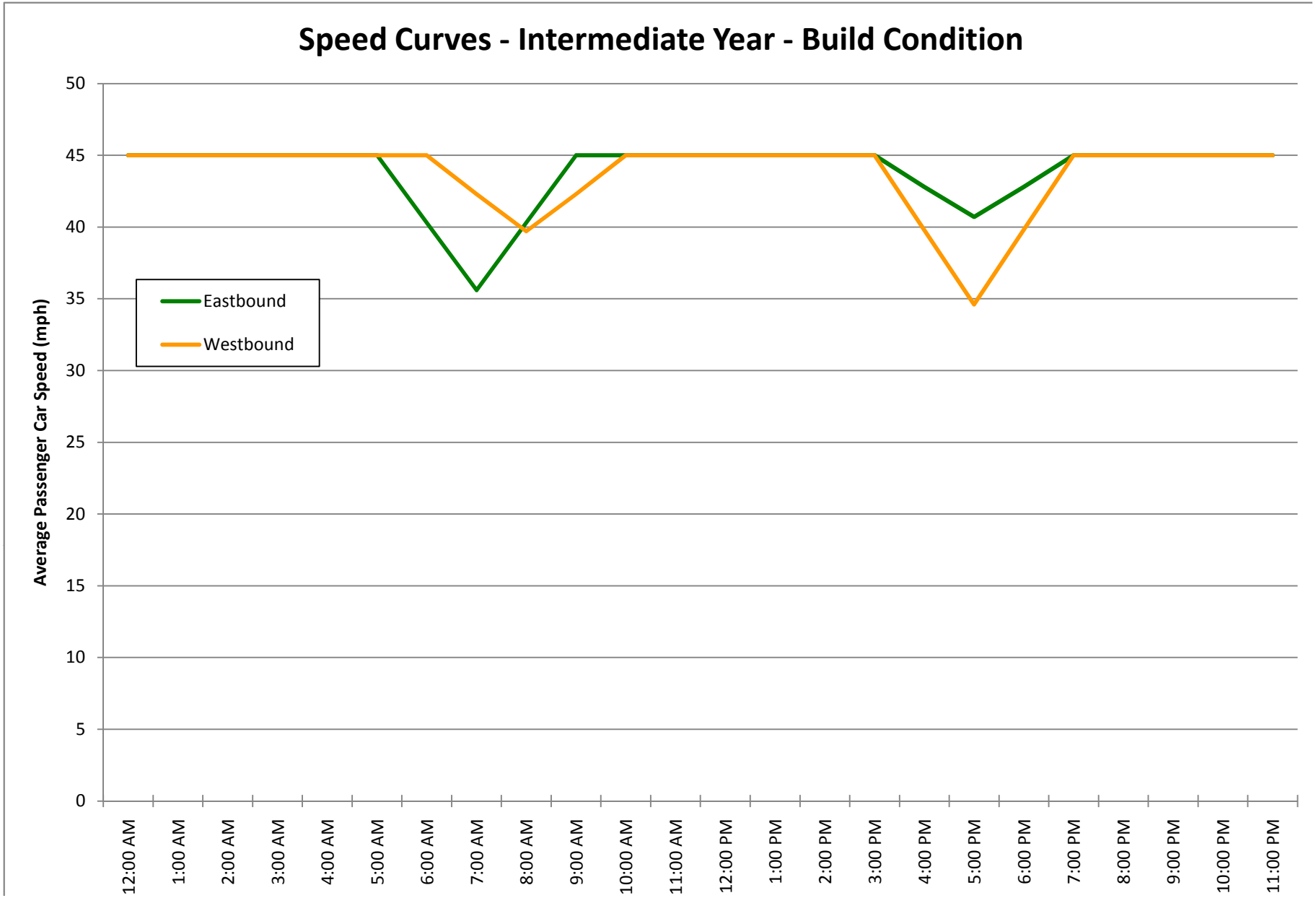
Multilane Highway Analyses - Intermediate Year (2015) - Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2015
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Total

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications							
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**% Heavy Vehicles**	
12:00 AM	243	212	0	2	29	212	2	29	0	0	0.55%	12.76%	
1:00 AM	153	112	0	0	41	110	0	41	0	2	0.35%	26.80%	
2:00 AM	110	75	2	0	33	75	0	33	2	0	0.25%	31.82%	
3:00 AM	150	117	0	4	29	117	4	29	0	0	0.34%	22.00%	
4:00 AM	315	269	2	8	36	269	8	36	2	0	0.72%	14.60%	
5:00 AM	1,052	960	12	34	46	960	38	46	8	0	2.40%	8.75%	
6:00 AM	2,695	2,496	31	107	61	2,492	119	61	19	4	6.14%	7.38%	
7:00 AM	3,335	3,125	38	97	75	3,123	108	75	27	2	7.59%	6.30%	
8:00 AM	2,933	2,677	42	115	99	2,673	128	99	29	4	6.68%	8.73%	
9:00 AM	2,173	1,915	36	122	100	1,913	136	100	22	2	4.95%	11.87%	
10:00 AM	2,078	1,815	37	122	104	1,815	135	104	24	0	4.73%	12.66%	
11:00 AM	2,666	2,414	42	110	100	2,410	123	100	29	4	6.07%	9.45%	
12:00 PM	3,107	2,842	31	114	120	2,832	127	120	18	10	7.08%	8.53%	Estimated Loudest Hour
1:00 PM	2,529	2,308	38	83	100	2,306	93	100	28	2	5.76%	8.74%	
2:00 PM	2,640	2,372	50	122	96	2,370	135	96	37	2	6.01%	10.15%	
3:00 PM	3,186	2,947	29	114	96	2,943	127	96	16	4	7.26%	7.50%	
4:00 PM	3,361	3,108	38	116	99	3,102	129	99	25	6	7.65%	7.53%	
5:00 PM	3,415	3,232	26	82	75	3,226	91	75	17	6	7.78%	5.36%	Peak Hour
6:00 PM	2,619	2,488	18	52	61	2,482	58	61	12	6	5.96%	5.00%	
7:00 PM	1,797	1,683	11	47	56	1,679	52	56	6	4	4.09%	6.34%	
8:00 PM	1,358	1,267	8	29	54	1,267	33	54	4	0	3.09%	6.70%	
9:00 PM	913	860	5	13	35	860	14	35	4	0	2.08%	5.81%	
10:00 PM	637	608	4	4	21	608	4	21	4	0	1.45%	4.55%	
11:00 PM	447	404	0	4	39	404	4	39	0	0	1.02%	9.62%	
Total	43,912	40,306	500	1,501	1,605	40,248	1,668	1,605	333	58	100.00%	8.21%	
Percentage	100.00%	91.78%	1.14%	3.42%	3.66%	91.65%	3.80%	3.66%	0.76%	0.13%			
Peak Hour	3,415	3,232	26	82	75	3,226	91	75	17	6			
Percentage	100.00%	94.64%	0.76%	2.40%	2.20%	94.46%	2.66%	2.20%	0.50%	0.18%			


Mainline Diurnal Curves - Intermediate Year - Build Condition
Eastbound
Westbound
Total
Eastbound Capacity
Westbound Capacity
Total Vehicles
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM
Begin Hour


Speed Curves - Intermediate Year - Build Condition
Average Passenger Car Speed (mph)
50
45
40
35
30
25
20
15
10
5
0
Eastbound
Westbound
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM

Multilane Highway Analyses - Future Year (2030) - No Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2030
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Eastbound

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications													
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**Driver Population Factor (f_p)**	**Peak Hour Factor (PHF)**	**% Heavy Vehicles**	**Heavy Vehicle Adjustment Factor (f_{HV})**	**PCE Flow Rate (v_p) (pc/h/ln)**	**Average Passenger Car Speed (mph)**	**Density (pc/mi/ln)**	**LOS**
12:00 AM	144	138	0	0	6	138	0	6	0	0	0.31%	1.00	0.90	4.17%	0.941	85	45.0	1.9	A
1:00 AM	67	58	0	0	9	58	0	9	0	0	0.14%	1.00	0.90	13.43%	0.832	45	45.0	1.0	A
2:00 AM	51	42	0	0	9	42	0	9	0	0	0.11%	1.00	0.90	17.65%	0.791	36	45.0	0.8	A
3:00 AM	69	58	0	0	11	58	0	11	0	0	0.15%	1.00	0.90	15.94%	0.807	48	45.0	1.1	A
4:00 AM	147	127	0	4	16	127	4	16	0	0	0.31%	1.00	0.90	13.61%	0.831	98	45.0	2.2	A
5:00 AM	686	640	2	20	24	640	22	24	0	0	1.47%	1.00	0.90	6.71%	0.909	419	45.0	9.3	A
6:00 AM	2,139	2,009	23	64	43	2,007	71	43	16	2	4.57%	1.00	0.90	6.08%	0.916	1,297	35.3	28.8	D
7:00 AM	2,540	2,411	28	58	43	2,409	64	43	22	2	5.43%	1.00	0.90	5.08%	0.929	1,519	25.7	34.1	D
8:00 AM	2,050	1,904	18	62	66	1,900	69	66	11	4	4.38%	1.00	0.90	7.12%	0.903	1,261	35.3	28.0	D
9:00 AM	1,231	1,091	20	62	58	1,089	69	58	13	2	2.63%	1.00	0.90	11.37%	0.854	801	45.0	17.8	B
10:00 AM	1,106	974	19	49	64	974	55	64	13	0	2.36%	1.00	0.90	11.93%	0.848	724	45.0	16.1	B
11:00 AM	1,205	1,087	16	44	58	1,087	49	58	11	0	2.58%	1.00	0.90	9.79%	0.872	768	45.0	17.1	B
12:00 PM	1,691	1,572	11	46	62	1,561	51	62	6	11	3.62%	1.00	0.90	7.04%	0.905	1,039	45.0	23.1	C
1:00 PM	1,362	1,262	18	33	49	1,262	37	49	14	0	2.91%	1.00	0.90	7.34%	0.901	840	45.0	18.7	C
2:00 PM	1,276	1,161	17	49	49	1,159	55	49	11	2	2.73%	1.00	0.90	9.01%	0.881	805	45.0	17.9	B
3:00 PM	1,409	1,307	9	44	49	1,305	49	49	4	2	3.01%	1.00	0.90	7.24%	0.902	868	45.0	19.3	C
4:00 PM	1,354	1,267	13	35	39	1,267	39	39	9	0	2.89%	1.00	0.90	6.43%	0.912	825	41.8	18.3	C
5:00 PM	1,405	1,339	7	30	29	1,337	33	29	4	2	3.00%	1.00	0.90	4.70%	0.934	836	38.6	18.6	C
6:00 PM	1,163	1,117	6	20	20	1,115	22	20	4	2	2.49%	1.00	0.90	3.96%	0.944	684	41.8	15.2	B
7:00 PM	943	899	4	20	20	899	22	20	2	0	2.02%	1.00	0.90	4.67%	0.935	561	45.0	12.5	B
8:00 PM	776	741	3	8	24	741	9	24	2	0	1.66%	1.00	0.90	4.51%	0.937	460	45.0	10.2	A
9:00 PM	553	538	0	4	11	538	4	11	0	0	1.18%	1.00	0.90	2.71%	0.961	320	45.0	7.1	A
10:00 PM	377	366	0	2	9	366	2	9	0	0	0.81%	1.00	0.90	2.92%	0.958	219	45.0	4.9	A
11:00 PM	250	239	0	0	11	239	0	11	0	0	0.54%	1.00	0.90	4.40%	0.938	148	45.0	3.3	A
Total	23,994	22,347	214	654	779	22,318	726	779	142	29	51.30%			6.86%					
Percentage	100.00%	93.13%	0.89%	2.73%	3.25%	93.01%	3.03%	3.25%	0.59%	0.12%									

Enter data in highlighted cells only.

Enter ADT or Growth Rate	
2030 No Build ADT	46,770
Growth Rate	

Site Input Data	
Terrain	Rolling
Facility Type	Multilane Highway

Eastbound Input Data	
Free Flow Speed	45
Travel Lanes	2

Westbound Input Data	
Free Flow Speed	45
Travel Lanes	2

Multilane Highway Analyses - Future Year (2030) - No Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2030
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Westbound

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications													
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**Driver Population Factor (f_p)**	**Peak Hour Factor (PHF)**	**% Heavy Vehicles**	**Heavy Vehicle Adjustment Factor (f_{HV})**	**PCE Flow Rate (v_p) (pc/h/ln)**	**Average Passenger Car Speed (mph)**	**Density (pc/mi/ln)**	**LOS**
12:00 AM	115	89	0	2	24	89	2	24	0	0	0.25%	1.00	0.90	22.61%	0.747	86	45.0	1.9	A
1:00 AM	96	61	0	0	35	59	0	35	0	2	0.21%	1.00	0.90	36.46%	0.646	83	45.0	1.8	A
2:00 AM	66	37	2	0	27	37	0	27	2	0	0.14%	1.00	0.90	43.94%	0.603	61	45.0	1.4	A
3:00 AM	91	67	0	4	20	67	4	20	0	0	0.19%	1.00	0.90	26.37%	0.717	71	45.0	1.6	A
4:00 AM	189	161	2	4	22	161	4	22	2	0	0.40%	1.00	0.90	14.81%	0.818	128	45.0	2.9	A
5:00 AM	435	384	11	16	24	384	18	24	9	0	0.93%	1.00	0.90	11.72%	0.850	284	45.0	6.3	A
6:00 AM	732	651	10	49	22	649	55	22	4	2	1.57%	1.00	0.90	11.07%	0.858	474	45.0	10.5	A
7:00 AM	1,012	918	11	46	37	918	51	37	6	0	2.16%	1.00	0.90	9.29%	0.878	641	42.6	14.2	B
8:00 AM	1,074	948	27	60	39	948	67	39	20	0	2.30%	1.00	0.90	11.73%	0.850	702	40.3	15.6	B
9:00 AM	1,083	947	19	68	49	947	76	49	11	0	2.32%	1.00	0.90	12.56%	0.841	715	42.6	15.9	B
10:00 AM	1,108	960	22	79	47	960	88	47	13	0	2.37%	1.00	0.90	13.36%	0.833	739	45.0	16.4	B
11:00 AM	1,635	1,484	28	74	49	1,480	82	49	20	4	3.50%	1.00	0.90	9.24%	0.878	1,034	45.0	23.0	C
12:00 PM	1,618	1,455	21	76	66	1,455	84	66	13	0	3.46%	1.00	0.90	10.07%	0.869	1,035	45.0	23.0	C
1:00 PM	1,331	1,195	22	56	58	1,193	62	58	16	2	2.85%	1.00	0.90	10.22%	0.867	853	45.0	19.0	C
2:00 PM	1,536	1,366	38	79	53	1,366	88	53	29	0	3.28%	1.00	0.90	11.07%	0.858	995	45.0	22.1	C
3:00 PM	1,984	1,832	22	77	53	1,830	86	53	13	2	4.24%	1.00	0.90	7.66%	0.897	1,229	45.0	27.3	D
4:00 PM	2,226	2,044	28	88	66	2,038	98	66	18	6	4.76%	1.00	0.90	8.18%	0.891	1,388	37.0	30.9	D
5:00 PM	2,232	2,103	20	58	51	2,099	64	51	14	4	4.77%	1.00	0.90	5.78%	0.920	1,348	29.0	29.9	D
6:00 PM	1,626	1,533	13	35	45	1,529	39	45	9	4	3.48%	1.00	0.90	5.72%	0.921	981	37.0	21.8	C
7:00 PM	971	895	7	30	39	891	33	39	4	4	2.08%	1.00	0.90	7.83%	0.895	603	45.0	13.4	B
8:00 PM	670	608	5	24	33	608	27	33	2	0	1.43%	1.00	0.90	9.25%	0.878	424	45.0	9.4	A
9:00 PM	420	378	5	10	27	378	11	27	4	0	0.90%	1.00	0.90	10.00%	0.870	268	45.0	6.0	A
10:00 PM	301	281	4	2	14	281	2	14	4	0	0.64%	1.00	0.90	6.64%	0.909	184	45.0	4.1	A
11:00 PM	226	191	0	4	31	191	4	31	0	0	0.47%	1.00	0.90	15.49%	0.811	155	45.0	3.4	A
Total	22,777	20,588	317	941	931	20,558	1,045	931	213	30	48.70%			9.61%					
Percentage	100.00%	90.88%	1.32%	3.92%	3.88%	90.74%	4.36%	3.88%	0.89%	0.13%									

Eastbound

LOS C/D Breakpoint	
Volume (veh/hr)	1,875
Average Speed (mph)	45.0

LOS D/E Breakpoint	
Volume (veh/hr)	2,490
Average Speed (mph)	44.4

LOS E/F Breakpoint	
Volume (veh/hr)	3,043
Average Speed (mph)	42.2

Westbound

LOS C/D Breakpoint	
Volume (veh/hr)	1,875
Average Speed (mph)	45.0

LOS D/E Breakpoint	
Volume (veh/hr)	2,490
Average Speed (mph)	44.4

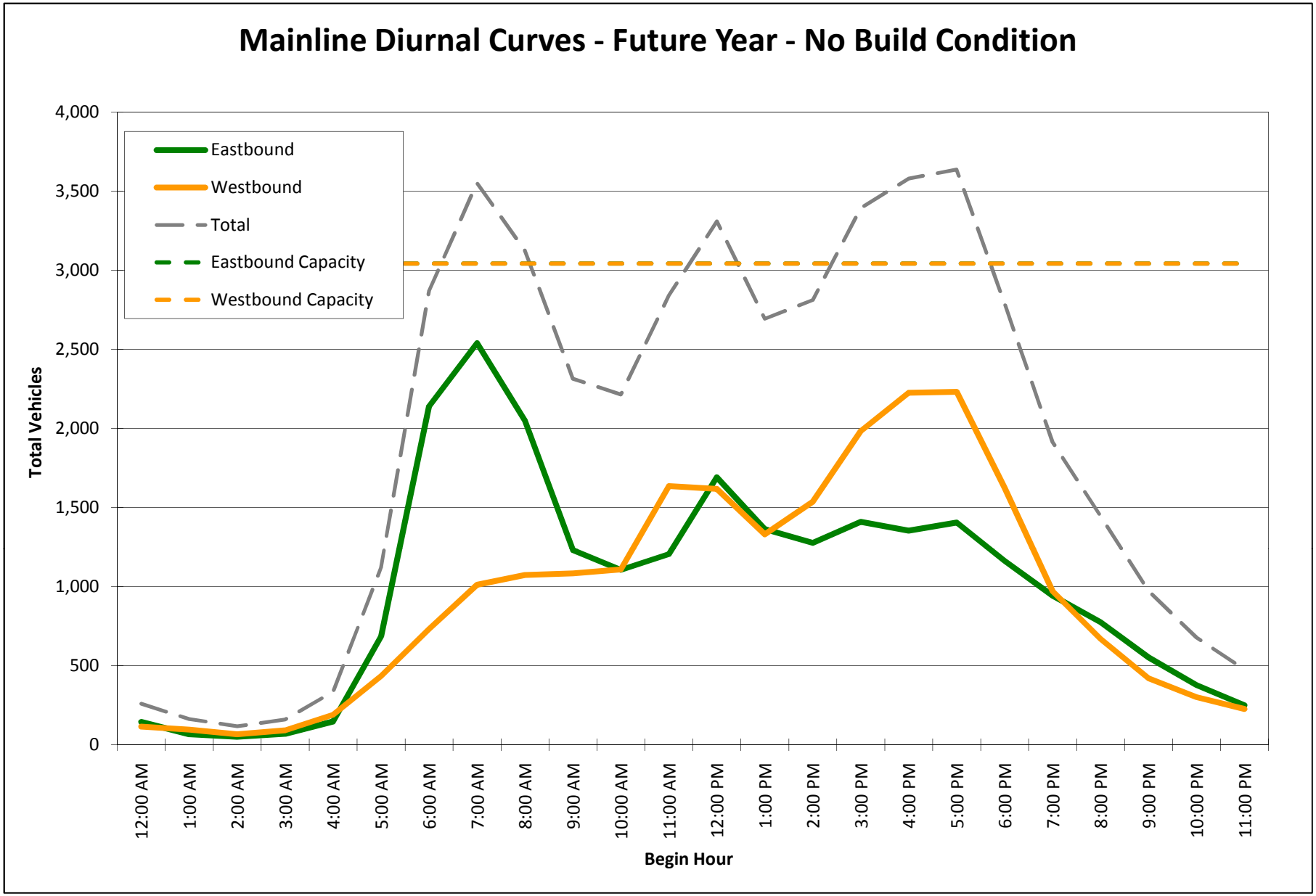
LOS E/F Breakpoint	
Volume (veh/hr)	3,043
Average Speed (mph)	42.2

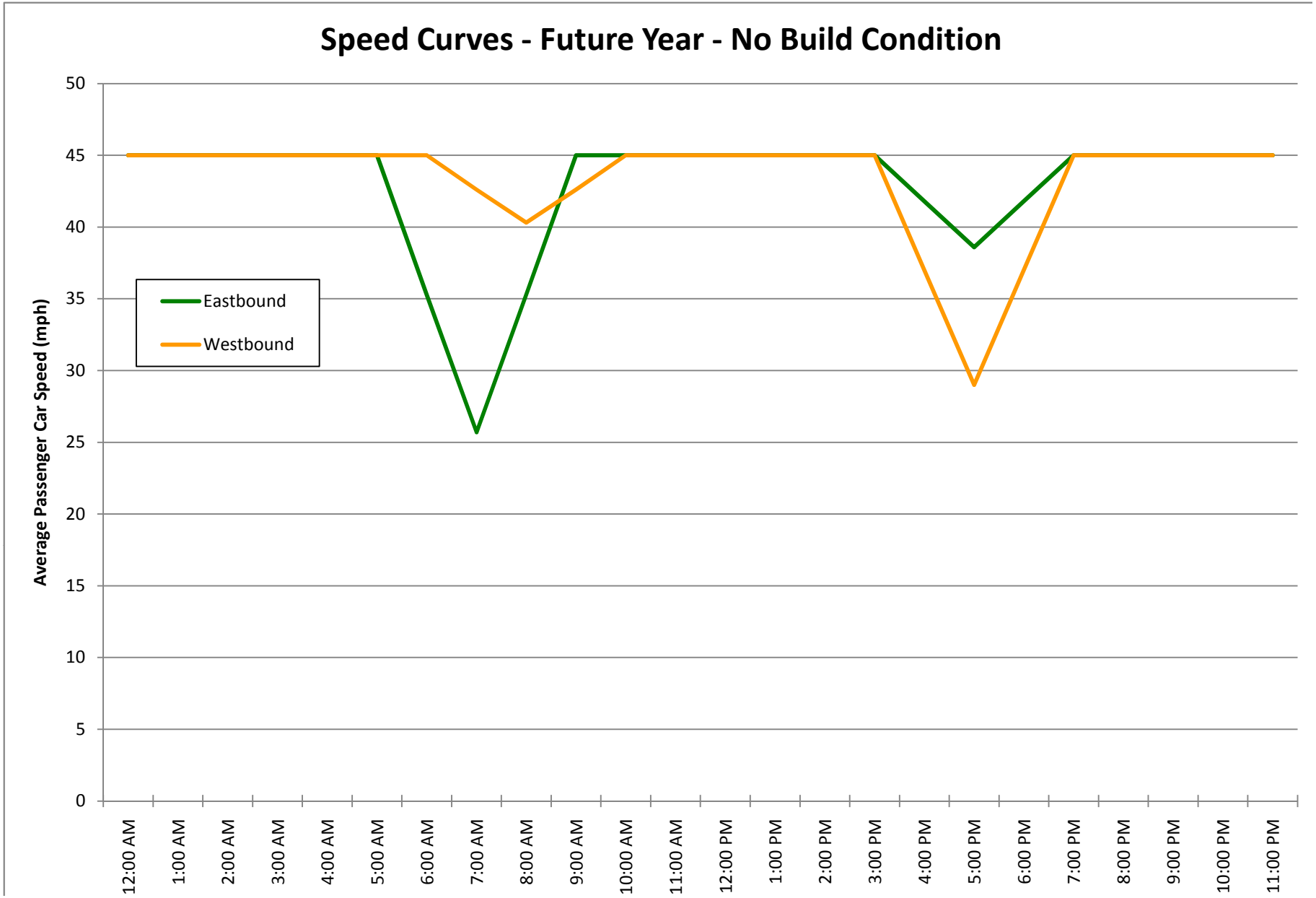
Multilane Highway Analyses - Future Year (2030) - No Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2030
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Total

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications							
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**% Heavy Vehicles**	
12:00 AM	259	227	0	2	30	227	2	30	0	0	0.55%	12.36%	
1:00 AM	163	119	0	0	44	117	0	44	0	2	0.35%	26.99%	
2:00 AM	117	79	2	0	36	79	0	36	2	0	0.25%	32.48%	
3:00 AM	160	125	0	4	31	125	4	31	0	0	0.34%	21.88%	
4:00 AM	336	288	2	8	38	288	8	38	2	0	0.72%	14.29%	
5:00 AM	1,121	1,024	13	36	48	1,024	40	48	9	0	2.40%	8.65%	
6:00 AM	2,871	2,660	33	113	65	2,656	126	65	20	4	6.14%	7.35%	
7:00 AM	3,552	3,329	39	104	80	3,327	115	80	28	2	7.59%	6.28%	
8:00 AM	3,124	2,852	45	122	105	2,848	136	105	31	4	6.68%	8.71%	
9:00 AM	2,314	2,038	39	130	107	2,036	145	107	24	2	4.95%	11.93%	
10:00 AM	2,214	1,934	41	128	111	1,934	143	111	26	0	4.73%	12.65%	
11:00 AM	2,840	2,571	44	118	107	2,567	131	107	31	4	6.07%	9.47%	
12:00 PM	3,309	3,027	32	122	128	3,016	135	128	19	11	7.07%	8.52%	Estimated Loudest Hour
1:00 PM	2,693	2,457	40	89	107	2,455	99	107	30	2	5.76%	8.76%	
2:00 PM	2,812	2,527	55	128	102	2,525	143	102	40	2	6.01%	10.14%	
3:00 PM	3,393	3,139	31	121	102	3,135	135	102	17	4	7.25%	7.49%	
4:00 PM	3,580	3,311	41	123	105	3,305	137	105	27	6	7.65%	7.51%	
5:00 PM	3,637	3,442	27	88	80	3,436	97	80	18	6	7.78%	5.36%	Peak Hour
6:00 PM	2,789	2,650	19	55	65	2,644	61	65	13	6	5.96%	4.98%	
7:00 PM	1,914	1,794	11	50	59	1,790	55	59	6	4	4.09%	6.27%	
8:00 PM	1,446	1,349	8	32	57	1,349	36	57	4	0	3.09%	6.71%	
9:00 PM	973	916	5	14	38	916	15	38	4	0	2.08%	5.86%	
10:00 PM	678	647	4	4	23	647	4	23	4	0	1.45%	4.57%	
11:00 PM	476	430	0	4	42	430	4	42	0	0	1.04%	9.66%	
Total	46,771	42,935	531	1,595	1,710	42,876	1,771	1,710	355	59	100.00%	8.20%	
Percentage	100.00%	91.79%	1.14%	3.41%	3.66%	91.66%	3.79%	3.66%	0.76%	0.13%			
Peak Hour	3,637	3,442	27	88	80	3,436	97	80	18	6			
Percentage	100.00%	94.64%	0.74%	2.42%	2.20%	94.48%	2.67%	2.20%	0.49%	0.16%			


Mainline Diurnal Curves - Future Year - No Build Condition
Eastbound
Westbound
Total
Eastbound Capacity
Westbound Capacity
Total Vehicles
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM
Begin Hour


Speed Curves - Future Year - No Build Condition
Average Passenger Car Speed (mph)
50
45
40
35
30
25
20
15
10
5
0
Eastbound
Westbound
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM

Multilane Highway Analyses - Future Year (2030) - Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2030
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Eastbound

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications													
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**Driver Population Factor (f_p)**	**Peak Hour Factor (PHF)**	**% Heavy Vehicles**	**Heavy Vehicle Adjustment Factor (f_{HV})**	**PCE Flow Rate (v_p) (pc/h/ln)**	**Average Passenger Car Speed (mph)**	**Density (pc/mi/ln)**	**LOS**
12:00 AM	144	138	0	0	6	138	0	6	0	0	0.31%	1.00	0.90	4.17%	0.941	57	45.0	1.3	A
1:00 AM	67	58	0	0	9	58	0	9	0	0	0.14%	1.00	0.90	13.43%	0.832	30	45.0	0.7	A
2:00 AM	51	42	0	0	9	42	0	9	0	0	0.11%	1.00	0.90	17.65%	0.791	24	45.0	0.5	A
3:00 AM	69	58	0	0	11	58	0	11	0	0	0.15%	1.00	0.90	15.94%	0.807	32	45.0	0.7	A
4:00 AM	147	127	0	4	16	127	4	16	0	0	0.31%	1.00	0.90	13.61%	0.831	66	45.0	1.5	A
5:00 AM	686	640	2	20	24	640	22	24	0	0	1.47%	1.00	0.90	6.71%	0.909	280	45.0	6.2	A
6:00 AM	2,139	2,009	23	64	43	2,007	71	43	16	2	4.57%	1.00	0.90	6.08%	0.916	864	40.0	19.2	C
7:00 AM	2,540	2,411	28	58	43	2,409	64	43	22	2	5.43%	1.00	0.90	5.08%	0.929	1,012	35.1	22.5	C
8:00 AM	2,050	1,904	18	62	66	1,900	69	66	11	4	4.38%	1.00	0.90	7.12%	0.903	840	40.0	18.7	C
9:00 AM	1,231	1,091	20	62	58	1,089	69	58	13	2	2.63%	1.00	0.90	11.37%	0.854	534	45.0	11.9	B
10:00 AM	1,106	974	19	49	64	974	55	64	13	0	2.36%	1.00	0.90	11.93%	0.848	483	45.0	10.7	A
11:00 AM	1,205	1,087	16	44	58	1,087	49	58	11	0	2.58%	1.00	0.90	9.79%	0.872	512	45.0	11.4	B
12:00 PM	1,691	1,572	11	46	62	1,561	51	62	6	11	3.62%	1.00	0.90	7.04%	0.905	692	45.0	15.4	B
1:00 PM	1,362	1,262	18	33	49	1,262	37	49	14	0	2.91%	1.00	0.90	7.34%	0.901	560	45.0	12.4	B
2:00 PM	1,276	1,161	17	49	49	1,159	55	49	11	2	2.73%	1.00	0.90	9.01%	0.881	536	45.0	11.9	B
3:00 PM	1,409	1,307	9	44	49	1,305	49	49	4	2	3.01%	1.00	0.90	7.24%	0.902	579	45.0	12.9	B
4:00 PM	1,354	1,267	13	35	39	1,267	39	39	9	0	2.89%	1.00	0.90	6.43%	0.912	550	42.9	12.2	B
5:00 PM	1,405	1,339	7	30	29	1,337	33	29	4	2	3.00%	1.00	0.90	4.70%	0.934	557	40.8	12.4	B
6:00 PM	1,163	1,117	6	20	20	1,115	22	20	4	2	2.49%	1.00	0.90	3.96%	0.944	456	42.9	10.1	A
7:00 PM	943	899	4	20	20	899	22	20	2	0	2.02%	1.00	0.90	4.67%	0.935	374	45.0	8.3	A
8:00 PM	776	741	3	8	24	741	9	24	2	0	1.66%	1.00	0.90	4.51%	0.937	307	45.0	6.8	A
9:00 PM	553	538	0	4	11	538	4	11	0	0	1.18%	1.00	0.90	2.71%	0.961	213	45.0	4.7	A
10:00 PM	377	366	0	2	9	366	2	9	0	0	0.81%	1.00	0.90	2.92%	0.958	146	45.0	3.2	A
11:00 PM	250	239	0	0	11	239	0	11	0	0	0.54%	1.00	0.90	4.40%	0.938	99	45.0	2.2	A
Total	23,994	22,347	214	654	779	22,318	726	779	142	29	51.30%			6.86%					
Percentage	100.00%	93.13%	0.89%	2.73%	3.25%	93.01%	3.03%	3.25%	0.59%	0.12%									

Enter data in highlighted cells only.

Enter ADT or Growth Rate	
2030 Build ADT	46,770
Growth Rate	

Site Input Data	
Terrain	Rolling
Facility Type	Multilane Highway

Eastbound Input Data	
Free Flow Speed	45
Travel Lanes	3

Westbound Input Data	
Free Flow Speed	45
Travel Lanes	3

Multilane Highway Analyses - Future Year (2030) - Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2030
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Westbound

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications													
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**Driver Population Factor (f_p)**	**Peak Hour Factor (PHF)**	**% Heavy Vehicles**	**Heavy Vehicle Adjustment Factor (f_{HV})**	**PCE Flow Rate (v_p) (pc/h/ln)**	**Average Passenger Car Speed (mph)**	**Density (pc/mi/ln)**	**LOS**
12:00 AM	115	89	0	2	24	89	2	24	0	0	0.25%	1.00	0.90	22.61%	0.747	57	45.0	1.3	A
1:00 AM	96	61	0	0	35	59	0	35	0	2	0.21%	1.00	0.90	36.46%	0.646	55	45.0	1.2	A
2:00 AM	66	37	2	0	27	37	0	27	2	0	0.14%	1.00	0.90	43.94%	0.603	41	45.0	0.9	A
3:00 AM	91	67	0	4	20	67	4	20	0	0	0.19%	1.00	0.90	26.37%	0.717	47	45.0	1.0	A
4:00 AM	189	161	2	4	22	161	4	22	2	0	0.40%	1.00	0.90	14.81%	0.818	86	45.0	1.9	A
5:00 AM	435	384	11	16	24	384	18	24	9	0	0.93%	1.00	0.90	11.72%	0.850	189	45.0	4.2	A
6:00 AM	732	651	10	49	22	649	55	22	4	2	1.57%	1.00	0.90	11.07%	0.858	316	45.0	7.0	A
7:00 AM	1,012	918	11	46	37	918	51	37	6	0	2.16%	1.00	0.90	9.29%	0.878	427	41.9	9.5	A
8:00 AM	1,074	948	27	60	39	948	67	39	20	0	2.30%	1.00	0.90	11.73%	0.850	468	38.8	10.4	A
9:00 AM	1,083	947	19	68	49	947	76	49	11	0	2.32%	1.00	0.90	12.56%	0.841	477	41.9	10.6	A
10:00 AM	1,108	960	22	79	47	960	88	47	13	0	2.37%	1.00	0.90	13.36%	0.833	493	45.0	10.9	A
11:00 AM	1,635	1,484	28	74	49	1,480	82	49	20	4	3.50%	1.00	0.90	9.24%	0.878	689	45.0	15.3	B
12:00 PM	1,618	1,455	21	76	66	1,455	84	66	13	0	3.46%	1.00	0.90	10.07%	0.869	690	45.0	15.3	B
1:00 PM	1,331	1,195	22	56	58	1,193	62	58	16	2	2.85%	1.00	0.90	10.22%	0.867	569	45.0	12.6	B
2:00 PM	1,536	1,366	38	79	53	1,366	88	53	29	0	3.28%	1.00	0.90	11.07%	0.858	663	45.0	14.7	B
3:00 PM	1,984	1,832	22	77	53	1,830	86	53	13	2	4.24%	1.00	0.90	7.66%	0.897	819	45.0	18.2	C
4:00 PM	2,226	2,044	28	88	66	2,038	98	66	18	6	4.76%	1.00	0.90	8.18%	0.891	926	39.2	20.6	C
5:00 PM	2,232	2,103	20	58	51	2,099	64	51	14	4	4.77%	1.00	0.90	5.78%	0.920	898	33.3	20.0	C
6:00 PM	1,626	1,533	13	35	45	1,529	39	45	9	4	3.48%	1.00	0.90	5.72%	0.921	654	39.2	14.5	B
7:00 PM	971	895	7	30	39	891	33	39	4	4	2.08%	1.00	0.90	7.83%	0.895	402	45.0	8.9	A
8:00 PM	670	608	5	24	33	608	27	33	2	0	1.43%	1.00	0.90	9.25%	0.878	283	45.0	6.3	A
9:00 PM	420	378	5	10	27	378	11	27	4	0	0.90%	1.00	0.90	10.00%	0.870	179	45.0	4.0	A
10:00 PM	301	281	4	2	14	281	2	14	4	0	0.64%	1.00	0.90	6.64%	0.909	123	45.0	2.7	A
11:00 PM	226	191	0	4	31	191	4	31	0	0	0.47%	1.00	0.90	15.49%	0.811	103	45.0	2.3	A
Total	22,777	20,588	317	941	931	20,558	1,045	931	213	30	48.70%			9.61%					
Percentage	100.00%	90.88%	1.32%	3.92%	3.88%	90.74%	4.36%	3.88%	0.89%	0.13%									

Eastbound

LOS C/D Breakpoint	
Volume (veh/hr)	2,813
Average Speed (mph)	45.0

LOS D/E Breakpoint	
Volume (veh/hr)	3,736
Average Speed (mph)	44.4

LOS E/F Breakpoint	
Volume (veh/hr)	4,565
Average Speed (mph)	42.2

Westbound

LOS C/D Breakpoint	
Volume (veh/hr)	2,813
Average Speed (mph)	45.0

LOS D/E Breakpoint	
Volume (veh/hr)	3,736
Average Speed (mph)	44.4

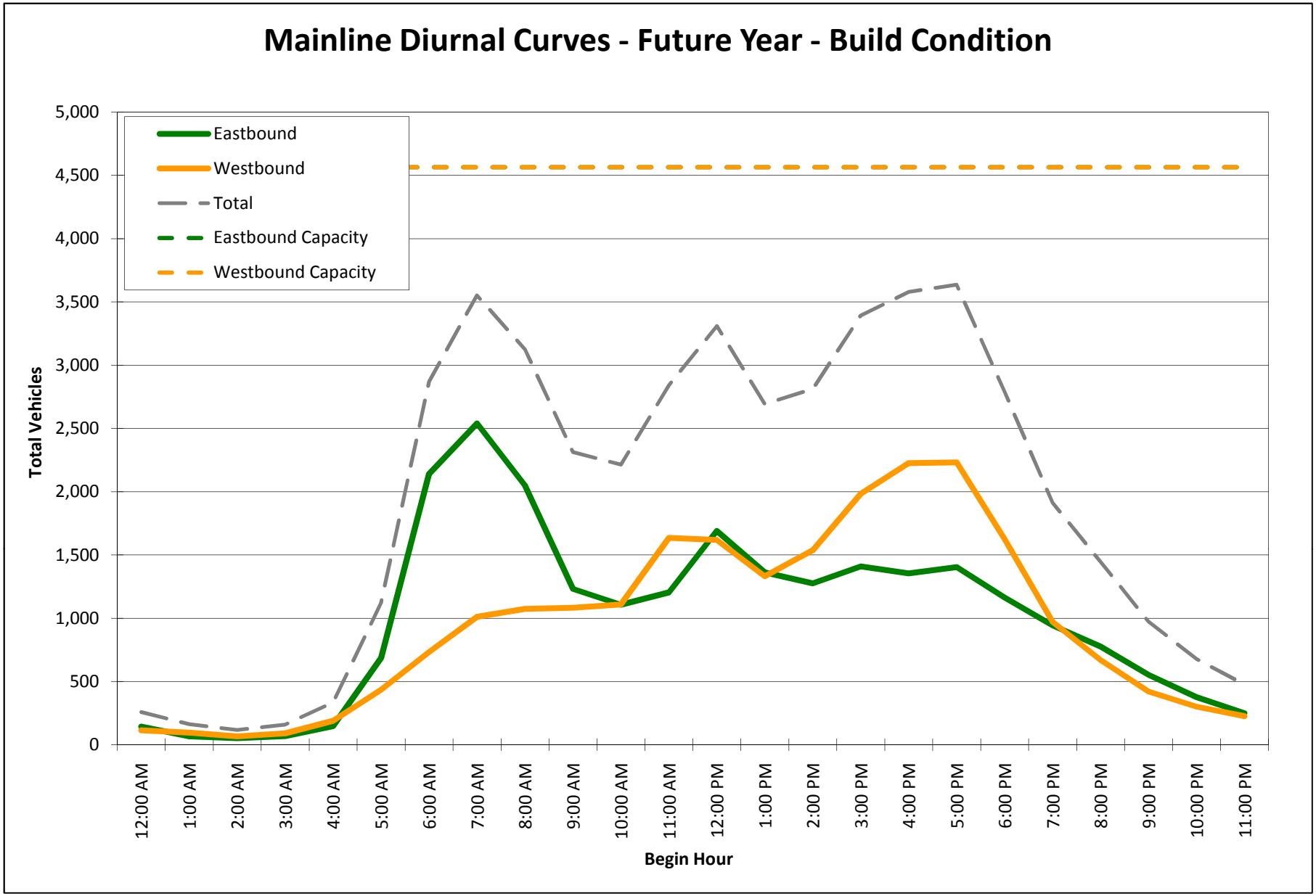
LOS E/F Breakpoint	
Volume (veh/hr)	4,565
Average Speed (mph)	42.2

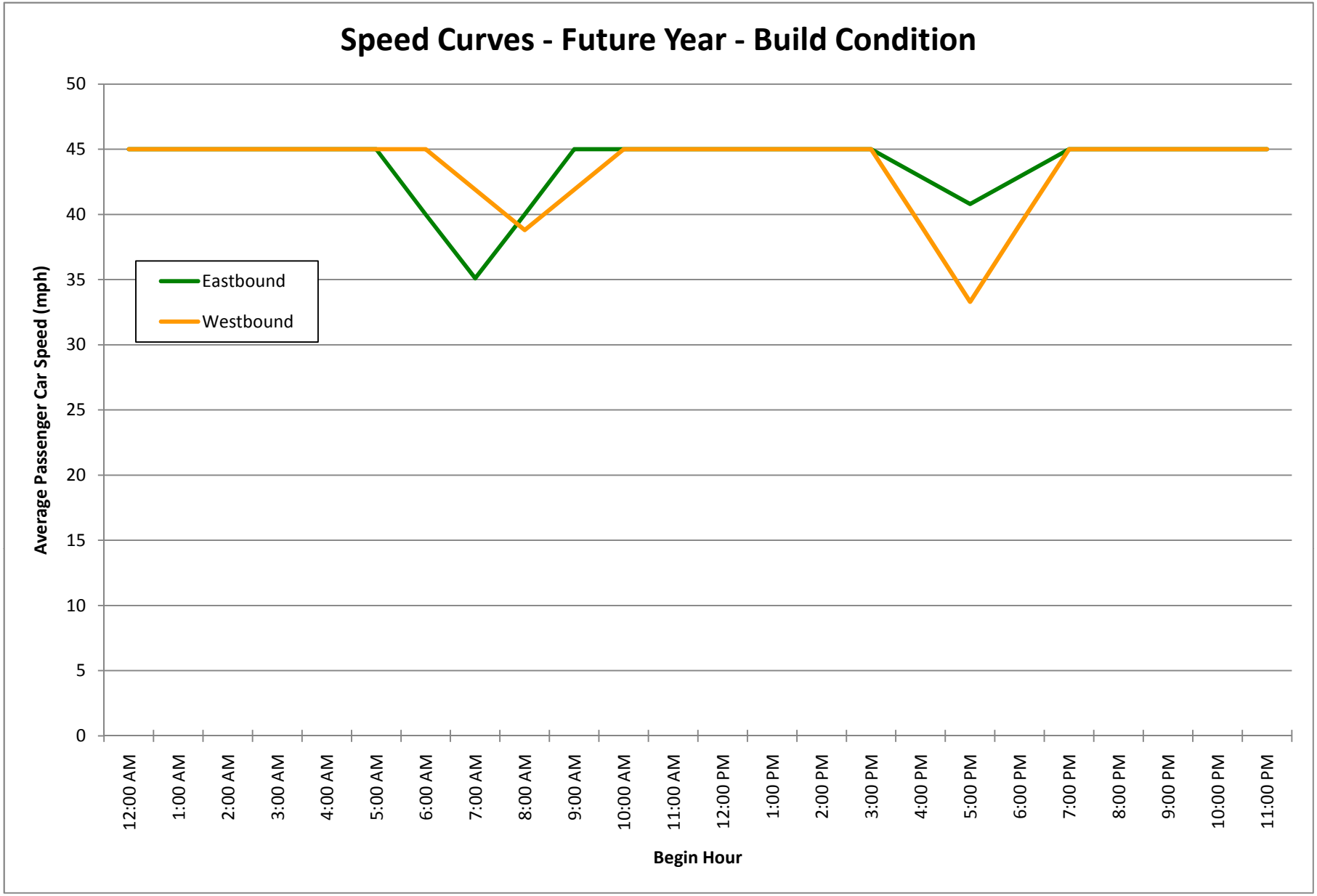
Multilane Highway Analyses - Future Year (2030) - Build Condition

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Year: 2030
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Direction: Total

		Air Quality Vehicle Classifications				Noise Analysis Vehicle Classifications							
Begin Hour	**TOTAL**	**Autos**	**Light Trucks**	**Medium Trucks**	**Heavy Trucks**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Buses**	**Motor-cycles**	**% DHV**	**% Heavy Vehicles**	
12:00 AM	259	227	0	2	30	227	2	30	0	0	0.55%	12.36%	
1:00 AM	163	119	0	0	44	117	0	44	0	2	0.35%	26.99%	
2:00 AM	117	79	2	0	36	79	0	36	2	0	0.25%	32.48%	
3:00 AM	160	125	0	4	31	125	4	31	0	0	0.34%	21.88%	
4:00 AM	336	288	2	8	38	288	8	38	2	0	0.72%	14.29%	
5:00 AM	1,121	1,024	13	36	48	1,024	40	48	9	0	2.40%	8.65%	
6:00 AM	2,871	2,660	33	113	65	2,656	126	65	20	4	6.14%	7.35%	
7:00 AM	3,552	3,329	39	104	80	3,327	115	80	28	2	7.59%	6.28%	
8:00 AM	3,124	2,852	45	122	105	2,848	136	105	31	4	6.68%	8.71%	
9:00 AM	2,314	2,038	39	130	107	2,036	145	107	24	2	4.95%	11.93%	
10:00 AM	2,214	1,934	41	128	111	1,934	143	111	26	0	4.73%	12.65%	
11:00 AM	2,840	2,571	44	118	107	2,567	131	107	31	4	6.07%	9.47%	
12:00 PM	3,309	3,027	32	122	128	3,016	135	128	19	11	7.07%	8.52%	Estimated Loudest Hour
1:00 PM	2,693	2,457	40	89	107	2,455	99	107	30	2	5.76%	8.76%	
2:00 PM	2,812	2,527	55	128	102	2,525	143	102	40	2	6.01%	10.14%	
3:00 PM	3,393	3,139	31	121	102	3,135	135	102	17	4	7.25%	7.49%	
4:00 PM	3,580	3,311	41	123	105	3,305	137	105	27	6	7.65%	7.51%	
5:00 PM	3,637	3,442	27	88	80	3,436	97	80	18	6	7.78%	5.36%	Peak Hour
6:00 PM	2,789	2,650	19	55	65	2,644	61	65	13	6	5.96%	4.98%	
7:00 PM	1,914	1,794	11	50	59	1,790	55	59	6	4	4.09%	6.27%	
8:00 PM	1,446	1,349	8	32	57	1,349	36	57	4	0	3.09%	6.71%	
9:00 PM	973	916	5	14	38	916	15	38	4	0	2.08%	5.86%	
10:00 PM	678	647	4	4	23	647	4	23	4	0	1.45%	4.57%	
11:00 PM	476	430	0	4	42	430	4	42	0	0	1.04%	9.66%	
Total	46,771	42,935	531	1,595	1,710	42,876	1,771	1,710	355	59	100.00%	8.20%	
Percentage	100.00%	91.79%	1.14%	3.41%	3.66%	91.66%	3.79%	3.66%	0.76%	0.13%			
Peak Hour	3,637	3,442	27	88	80	3,436	97	80	18	6			
Percentage	100.00%	94.64%	0.74%	2.42%	2.20%	94.48%	2.67%	2.20%	0.49%	0.16%			


Mainline Diurnal Curves - Future Year - Build Condition
Eastbound
Westbound
Total
Eastbound Capacity
Westbound Capacity
Total Vehicles
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM
Begin Hour


Speed Curves - Future Year - Build Condition
Average Passenger Car Speed (mph)
50
45
40
35
30
25
20
15
10
5
0
Eastbound
Westbound
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM
Begin Hour

Air Quality Traffic Data - Summary Sheet

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: Wednesday, April 11, 2012 to Thursday, April 12, 2012
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Condition:	Existing	Intermediate (No Build)	Intermediate (Build)	Future (No Build)	Future (Build)
Year:	2012	2015	2015	2030	2030
ADT:	22,800	43,910	43,910	46,770	46,770
DHV:	8%	8%	8%	8%	8%
Directional Distribution:	51%	51%	51%	51%	51%
% Trucks (ADT):	8% (1824)	8% (3513)	8% (3513)	8% (3742)	8% (3742)
% Trucks (DHV):	5% (91)	5% (176)	5% (176)	5% (187)	5% (187)
Facility Type:	Multilane Highway	Multilane Highway	Multilane Highway	Multilane Highway	Multilane Highway
Max LOS Reached:					
Eastbound	B	D	C	D	C
Westbound	B	D	C	D	C

Air Quality Traffic Data - Summary Sheet

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: Wednesday, April 11, 2012 to Thursday, April 12, 2012
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Condition: **Existing (2012)**

Average Daily Traffic:	Light Trucks	Medium Trucks	Heavy Trucks	Total
Gasoline Powered:	0.55%	1.67%	0.18%	2.40%
Diesel Powered:	0.55%	1.67%	3.38%	5.60%
Total:	1.10%	3.34%	3.56%	8.00%

Design Hour Volume:	Light Trucks	Medium Trucks	Heavy Trucks	Total
Gasoline Powered:	0.37%	1.11%	0.10%	1.58%
Diesel Powered:	0.37%	1.10%	1.95%	3.42%
Total:	0.74%	2.21%	2.05%	5.00%

	Eastbound		**Westbound**	
Multilane Highway LOS:	Volume	Speed	Volume	Speed
LOS C/D Breakpoint	1,875 vph	45.0 mph	1,875 vph	45.0 mph
LOS D/E Breakpoint	2,491 vph	44.4 mph	2,491 vph	44.4 mph
LOS E/F Breakpoint	3,044 vph	42.2 mph	3,044 vph	42.2 mph

Diurnal Curve:

Begin Hour	**% of ADT**
12:00 AM	0.55%
1:00 AM	0.35%
2:00 AM	0.25%
3:00 AM	0.34%
4:00 AM	0.72%
5:00 AM	2.40%
6:00 AM	6.14%
7:00 AM	7.59%
8:00 AM	6.68%
9:00 AM	4.95%
10:00 AM	4.73%
11:00 AM	6.07%
12:00 PM	7.08%
1:00 PM	5.76%
2:00 PM	6.01%
3:00 PM	7.26%
4:00 PM	7.66%
5:00 PM	7.78%
6:00 PM	5.96%
7:00 PM	4.09%
8:00 PM	3.09%
9:00 PM	2.08%
10:00 PM	1.45%
11:00 PM	1.01%
Total	100.00%

Air Quality Traffic Data - Summary Sheet

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: Wednesday, April 11, 2012 to Thursday, April 12, 2012
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Condition: **Intermediate No Build (2015)**

Average Daily Traffic:	Light Trucks	Medium Trucks	Heavy Trucks	Total
Gasoline Powered:	0.56%	1.67%	0.18%	2.41%
Diesel Powered:	0.55%	1.66%	3.38%	5.59%
Total:	1.11%	3.33%	3.56%	8.00%

Design Hour Volume:	Light Trucks	Medium Trucks	Heavy Trucks	Total
Gasoline Powered:	0.36%	1.12%	0.10%	1.58%
Diesel Powered:	0.35%	1.12%	1.95%	3.42%
Total:	0.71%	2.24%	2.05%	5.00%

	Eastbound		**Westbound**	
Multilane Highway LOS:	Volume	Speed	Volume	Speed
LOS C/D Breakpoint	1,875 vph	45.0 mph	1,875 vph	45.0 mph
LOS D/E Breakpoint	2,490 vph	44.4 mph	2,490 vph	44.4 mph
LOS E/F Breakpoint	3,043 vph	42.2 mph	3,043 vph	42.2 mph

Diurnal Curve:

Begin Hour	**% of ADT**
12:00 AM	0.55%
1:00 AM	0.35%
2:00 AM	0.25%
3:00 AM	0.34%
4:00 AM	0.72%
5:00 AM	2.40%
6:00 AM	6.14%
7:00 AM	7.59%
8:00 AM	6.68%
9:00 AM	4.95%
10:00 AM	4.73%
11:00 AM	6.07%
12:00 PM	7.08%
1:00 PM	5.76%
2:00 PM	6.01%
3:00 PM	7.26%
4:00 PM	7.65%
5:00 PM	7.78%
6:00 PM	5.96%
7:00 PM	4.09%
8:00 PM	3.09%
9:00 PM	2.08%
10:00 PM	1.45%
11:00 PM	1.02%
Total	100.00%

Air Quality Traffic Data - Summary Sheet

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: Wednesday, April 11, 2012 to Thursday, April 12, 2012
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Condition: **Intermediate Build (2015)**

Average Daily Traffic:	Light Trucks	Medium Trucks	Heavy Trucks	Total
Gasoline Powered:	0.56%	1.67%	0.18%	2.41%
Diesel Powered:	0.55%	1.66%	3.38%	5.59%
Total:	1.11%	3.33%	3.56%	8.00%

Design Hour Volume:	Light Trucks	Medium Trucks	Heavy Trucks	Total
Gasoline Powered:	0.36%	1.12%	0.10%	1.58%
Diesel Powered:	0.35%	1.12%	1.95%	3.42%
Total:	0.71%	2.24%	2.05%	5.00%

	Eastbound		**Westbound**	
Multilane Highway LOS:	Volume	Speed	Volume	Speed
LOS C/D Breakpoint	2,812 vph	45.0 mph	2,812 vph	45.0 mph
LOS D/E Breakpoint	3,735 vph	44.4 mph	3,735 vph	44.4 mph
LOS E/F Breakpoint	4,564 vph	42.2 mph	4,564 vph	42.2 mph

Diurnal Curve:

Begin Hour	**% of ADT**
12:00 AM	0.55%
1:00 AM	0.35%
2:00 AM	0.25%
3:00 AM	0.34%
4:00 AM	0.72%
5:00 AM	2.40%
6:00 AM	6.14%
7:00 AM	7.59%
8:00 AM	6.68%
9:00 AM	4.95%
10:00 AM	4.73%
11:00 AM	6.07%
12:00 PM	7.08%
1:00 PM	5.76%
2:00 PM	6.01%
3:00 PM	7.26%
4:00 PM	7.65%
5:00 PM	7.78%
6:00 PM	5.96%
7:00 PM	4.09%
8:00 PM	3.09%
9:00 PM	2.08%
10:00 PM	1.45%
11:00 PM	1.02%
Total	100.00%

Air Quality Traffic Data - Summary Sheet

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: Wednesday, April 11, 2012 to Thursday, April 12, 2012
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Condition: **Future No Build (2030)**

Average Daily Traffic:	Light Trucks	Medium Trucks	Heavy Trucks	Total
Gasoline Powered:	0.56%	1.67%	0.18%	2.41%
Diesel Powered:	0.55%	1.66%	3.38%	5.59%
Total:	1.11%	3.33%	3.56%	8.00%

Design Hour Volume:	Light Trucks	Medium Trucks	Heavy Trucks	Total
Gasoline Powered:	0.35%	1.13%	0.10%	1.58%
Diesel Powered:	0.34%	1.13%	1.95%	3.42%
Total:	0.69%	2.26%	2.05%	5.00%

	Eastbound		**Westbound**	
Multilane Highway LOS:	Volume	Speed	Volume	Speed
LOS C/D Breakpoint	1,875 vph	45.0 mph	1,875 vph	45.0 mph
LOS D/E Breakpoint	2,490 vph	44.4 mph	2,490 vph	44.4 mph
LOS E/F Breakpoint	3,043 vph	42.2 mph	3,043 vph	42.2 mph

Diurnal Curve:

Begin Hour	**% of ADT**
12:00 AM	0.55%
1:00 AM	0.35%
2:00 AM	0.25%
3:00 AM	0.34%
4:00 AM	0.72%
5:00 AM	2.40%
6:00 AM	6.14%
7:00 AM	7.59%
8:00 AM	6.68%
9:00 AM	4.95%
10:00 AM	4.73%
11:00 AM	6.07%
12:00 PM	7.07%
1:00 PM	5.76%
2:00 PM	6.01%
3:00 PM	7.25%
4:00 PM	7.65%
5:00 PM	7.78%
6:00 PM	5.96%
7:00 PM	4.09%
8:00 PM	3.09%
9:00 PM	2.08%
10:00 PM	1.45%
11:00 PM	1.04%
Total	100.00%

Air Quality Traffic Data - Summary Sheet

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: Wednesday, April 11, 2012 to Thursday, April 12, 2012
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Condition: **Future Build (2030)**

Average Daily Traffic:	Light Trucks	Medium Trucks	Heavy Trucks	Total
Gasoline Powered:	0.56%	1.67%	0.18%	2.41%
Diesel Powered:	0.55%	1.66%	3.38%	5.59%
Total:	1.11%	3.33%	3.56%	8.00%

Design Hour Volume:	Light Trucks	Medium Trucks	Heavy Trucks	Total
Gasoline Powered:	0.35%	1.13%	0.10%	1.58%
Diesel Powered:	0.34%	1.13%	1.95%	3.42%
Total:	0.69%	2.26%	2.05%	5.00%

	Eastbound		**Westbound**	
Multilane Highway LOS:	Volume	Speed	Volume	Speed
LOS C/D Breakpoint	2,813 vph	45.0 mph	2,813 vph	45.0 mph
LOS D/E Breakpoint	3,736 vph	44.4 mph	3,736 vph	44.4 mph
LOS E/F Breakpoint	4,565 vph	42.2 mph	4,565 vph	42.2 mph

Diurnal Curve:

Begin Hour	**% of ADT**
12:00 AM	0.55%
1:00 AM	0.35%
2:00 AM	0.25%
3:00 AM	0.34%
4:00 AM	0.72%
5:00 AM	2.40%
6:00 AM	6.14%
7:00 AM	7.59%
8:00 AM	6.68%
9:00 AM	4.95%
10:00 AM	4.73%
11:00 AM	6.07%
12:00 PM	7.07%
1:00 PM	5.76%
2:00 PM	6.01%
3:00 PM	7.25%
4:00 PM	7.65%
5:00 PM	7.78%
6:00 PM	5.96%
7:00 PM	4.09%
8:00 PM	3.09%
9:00 PM	2.08%
10:00 PM	1.45%
11:00 PM	1.04%
Total	100.00%

Noise Traffic Data - Summary Sheet

Station ID: B2320
Location: MD22-.20 MI E OF MD132A (BEARDS HILL RD)
Date: Wednesday, April 11, 2012 to Thursday, April 12, 2012
Project: MD 22 - East of Beards Hill Road to MD 462
FMIS: HA348B21

Condition:	Existing	Future (No Build)	Future (Build)
Year:	2012	2030	2030
ADT:	22,800	46,770	46,770
DHV:	8%	8%	8%
Directional Distribution:	51%	51%	51%
% Trucks (ADT):	8% (1824)	8% (3742)	8% (3742)
% Trucks (DHV):	5% (91)	5% (187)	5% (187)
Facility Type:	Multilane Highway	Multilane Highway	Multilane Highway
Max LOS Reached:			
Eastbound	B	D	C
Westbound	B	D	C

Condition: **Existing (2012)**

	Eastbound		Westbound	
Multilane Highway LOS:	Volume	Speed	Volume	Speed
LOS C/D Breakpoint	1,875 vph	45.0 mph	1,875 vph	45.0 mph
LOS D/E Breakpoint	2,491 vph	44.4 mph	2,491 vph	44.4 mph
LOS E/F Breakpoint	3,044 vph	42.2 mph	3,044 vph	42.2 mph

Condition: **Future No Build (2030)**

	Eastbound		Westbound	
Multilane Highway LOS:	Volume	Speed	Volume	Speed
LOS C/D Breakpoint	1,875 vph	45.0 mph	1,875 vph	45.0 mph
LOS D/E Breakpoint	2,490 vph	44.4 mph	2,490 vph	44.4 mph
LOS E/F Breakpoint	3,043 vph	42.2 mph	3,043 vph	42.2 mph

Condition: **Future Build (2030)**

	Eastbound		Westbound	
Multilane Highway LOS:	Volume	Speed	Volume	Speed
LOS C/D Breakpoint	2,813 vph	45.0 mph	2,813 vph	45.0 mph
LOS D/E Breakpoint	3,736 vph	44.4 mph	3,736 vph	44.4 mph
LOS E/F Breakpoint	4,565 vph	42.2 mph	4,565 vph	42.2 mph

APPENDIX D

INTERAGENCY CONSULTATION

Michael Kelly

From: Sara Tomlinson <stomlinson@baltometro.org>
Sent: Wednesday, July 25, 2012 3:54 PM
To: Michael Kelly
Cc: raris@baltometro.org
Subject: MD 22 at 462 and MD 22 at Beards Hill Road

Mike,

This email is to confirm that the Interagency Consultation Group of the Baltimore Regional Transportation Board decided at their July 18, 2012 meeting that they believe the MD22 at Beards Hill Road and MD 22 at MD 462 project is *not a project of air quality concern*.

Thank you,

Sara Tomlinson

Sara Tomlinson
Senior Transportation Planner, Environmental
Baltimore Metropolitan Council
Offices @ McHenry Row
1500 Whetstone Way, Suite 300
Baltimore, MD 21230
P: 410-732-0500 x1035
stomlinson@baltometro.org
www.baltometro.org

Confidentiality Statement: This message may contain legally privileged and confidential information that is intended only for the use of the recipient(s) named above. If you are not an intended recipient, taking any action based on the contents of this message is strictly prohibited. Please immediately notify the sender if you have received this message in error.

Michael Kelly

From: Martin Kotsch <Kotsch.Martin@epamail.epa.gov>
Sent: Wednesday, July 11, 2012 6:15 AM
To: Michael Kelly
Cc: Barbara Rudnick; bhug@mde.state.md.us; CBrandt@sha.state.md.us; EHabic@sha.state.md.us; HLowe@sha.state.md.us; jeanette.mar@dot.gov; jwilkinson@mde.state.md.us; stomlinson@baltometro.org
Subject: Re: MD22 at Beards HIll Road & MD 462 Air Quality Interagency Consultation

I am only responding to the PM hot spot section at this time pending the meeting at BMC on July 18 to discuss the regional conformity requirements for the project.

Based on my review of the AADT and the diesel truck percentages for the build and no-build scenarios, I agree that for PM the project is not of air quality concern.

From: "Michael Kelly" <mkelly@wtbco.com>
To: <bhug@mde.state.md.us>, Martin Kotsch/R3/USEPA/US@EPA, Barbara Rudnick/R3/USEPA/US@EPA, <stomlinson@baltometro.org>, <jeanette.mar@dot.gov>, <jwilkinson@mde.state.md.us>
Cc: <HLowe@sha.state.md.us>, <CBrandt@sha.state.md.us>, <EHabic@sha.state.md.us>, <mkelly@wtbco.com>
Date: 06/28/2012 03:37 PM
Subject: MD22 at Beards HIll Road & MD 462 Air Quality Interagency Consultation

---

On behalf of the Maryland State Highway Administration, submitted herewith is the Air Quality Technical Report for improvements to MD 22 at Beards Hill Road and MD 462 in Harford County, Maryland.
The project limits are on MD22 from east of I-95 to east of MD 462.
This report includes the PM 2.5 Conformity Determination, as well as CO, MSAT and GHG assessments. MSHA has determined that this project is not of air quality concern and is requesting concurrence from the Interagency Consultation Group.
The project is included in the LRP (PlanIt2035) and TIP as Project ID 65-0804-39, but it is a listed as “exempt”. Because the scope of the improvements is different from that in the LRP and Tip, SHA is currently preparing a request for amending the plan for the current scope of improvements.

Please review and provide concurrence/comments prior to 7/15/2012. Also, please provide any additional comments that you may have.

Please note that due to size the Appendices will be sent in a separate email

Thank you,

Michael Kelly
The Wilson T. Ballard Company
410-363-0150

[attachment "MD22_Beards_MD462_AQTR_June28.pdf" deleted by Martin Kotsch/R3/USEPA/US] [attachment "MD22_Mapping.pdf" deleted by Martin Kotsch/R3/USEPA/US]

Baltimore Regional Transportation Board

The Metropolitan Planning Organization for the Baltimore Region

INTERAGENCY CONSULTATION GROUP

Wednesday, July 18, 2012
8:30 A.M.
Baltimore Metropolitan Council
1500 Whetstone Way, Suite 300
Baltimore, MD 21230

AGENDA

1. **Welcome & Introductions**
2. **Approval of the May 16, 2012 ICG Meeting Minutes**
3. **Reports of Recent Meetings (10 minutes)**
   - **a.** Baltimore Regional Transportation Board (6/27/12)
   - **b.** Technical Committee (7/11/12)
4. **Transportation Planning (35 minutes)**
   - **a.** TIP Amendments: ICG will review draft TIP amendments requested by the Maryland State Highway Administration.
   - **b.** I-95 Welcome Center Project: SHA will present information on the I-95 Welcome Center Project.
5. **Update from Maryland Energy Administration (20 minutes)**
   - **a.** Chris Rice of the Maryland Energy Administration will provide an update on their transportation-related initiatives.
6. **Other Business (15 minutes)**

Next Meeting – Wednesday, September 5, 2012

Upcoming Meetings
Technical Committee: July 11, 2012, 9:30 A.M.
Bicycle and Pedestrian Advisory Group: July 11, 2012, Noon @ Pip Moyer Rec Center in Annapolis
Cooperative Forecasting Group: July 18, 2012, 10:00 A.M.
Baltimore Regional Transportation Board: July 31, 2012, 9:00 A.M.

Baltimore Region FY 2012-2015 Transportation Improvement Program (TIP)

AMENDMENTS

BRAC Related Intersections near Aberdeen Proving Ground MD 140 at Painter's Mill Road

Public Meeting

Baltimore, MD – July 18, 2012

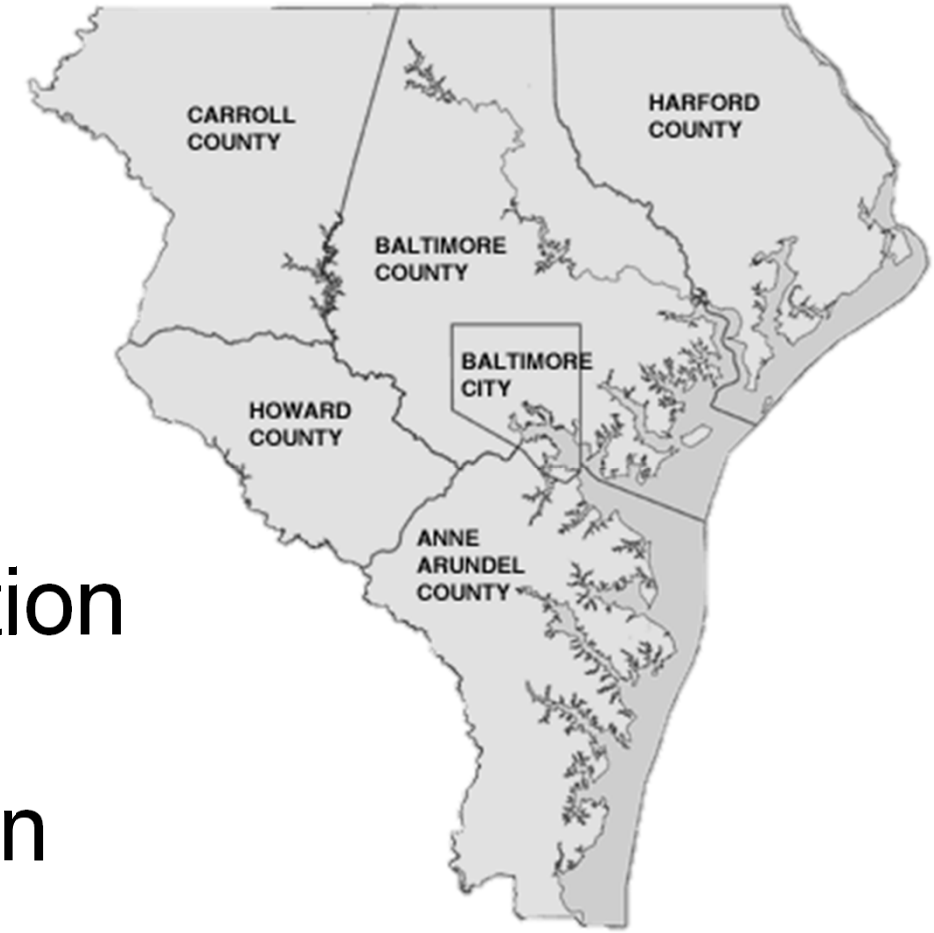
Baltimore Metropolitan Council

BRTB

Who We Are

- BMC - Organization of Region's Elected Executives.

- BRTB - Baltimore Regional Transportation Board – Metropolitan Planning Organization



Baltimore Metropolitan Council

BRTB

BRTB Members

- City of Annapolis – Joshua J. Cohen, Mayor (Vice Chair)
- Anne Arundel County - John R. Leopold, County Executive
- City of Baltimore - Stephanie Rawlings-Blake, Mayor
- Baltimore County - Kevin Kamenetz, County Executive
- Carroll County - Haven Shoemaker, Member, Board of Commissioners
- Harford County - David R. Craig, County Executive (Chair)
- Howard County - Ken Ulman, County Executive
- MD Department of Transportation - Beverley Swaim-Staley, Secretary
- MD Department of the Environment - Robert Summers, Ph.D., Secretary
- Maryland Department of Planning - Richard E. Hall, Secretary
- Maryland Transit Administration - Ralign T. Wells, Administrator

What We Do - BRTB

- Air Quality
- Bicycle and Pedestrian
- Emergency Preparedness
- Freight
- Safety
- Transit

What We Do - BRTB

- Annual work program
- Short-term transportation program (TIP)
- Long-Range Transportation Plan
- Air quality assessments of all transportation projects

What is the Transportation Improvement Program (TIP)

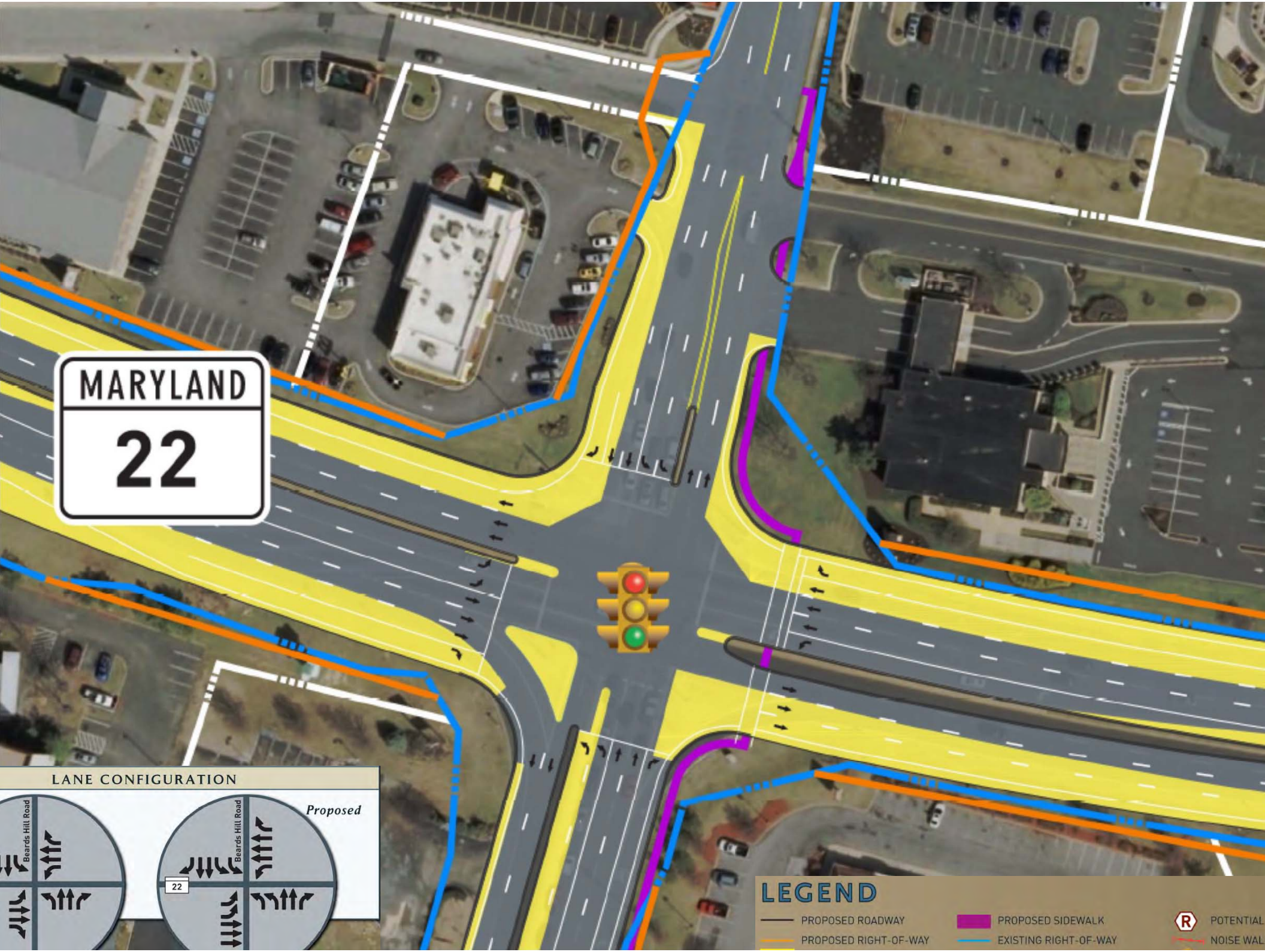
- Short-range (four-year) program of transportation improvements & priority projects.
- Authorization to seek federal funds
- Financially constrained
- Usually updated annually: Current is FY 2012-2015.
- Amendments require 30-day public review
  - New projects, New funding, etc.

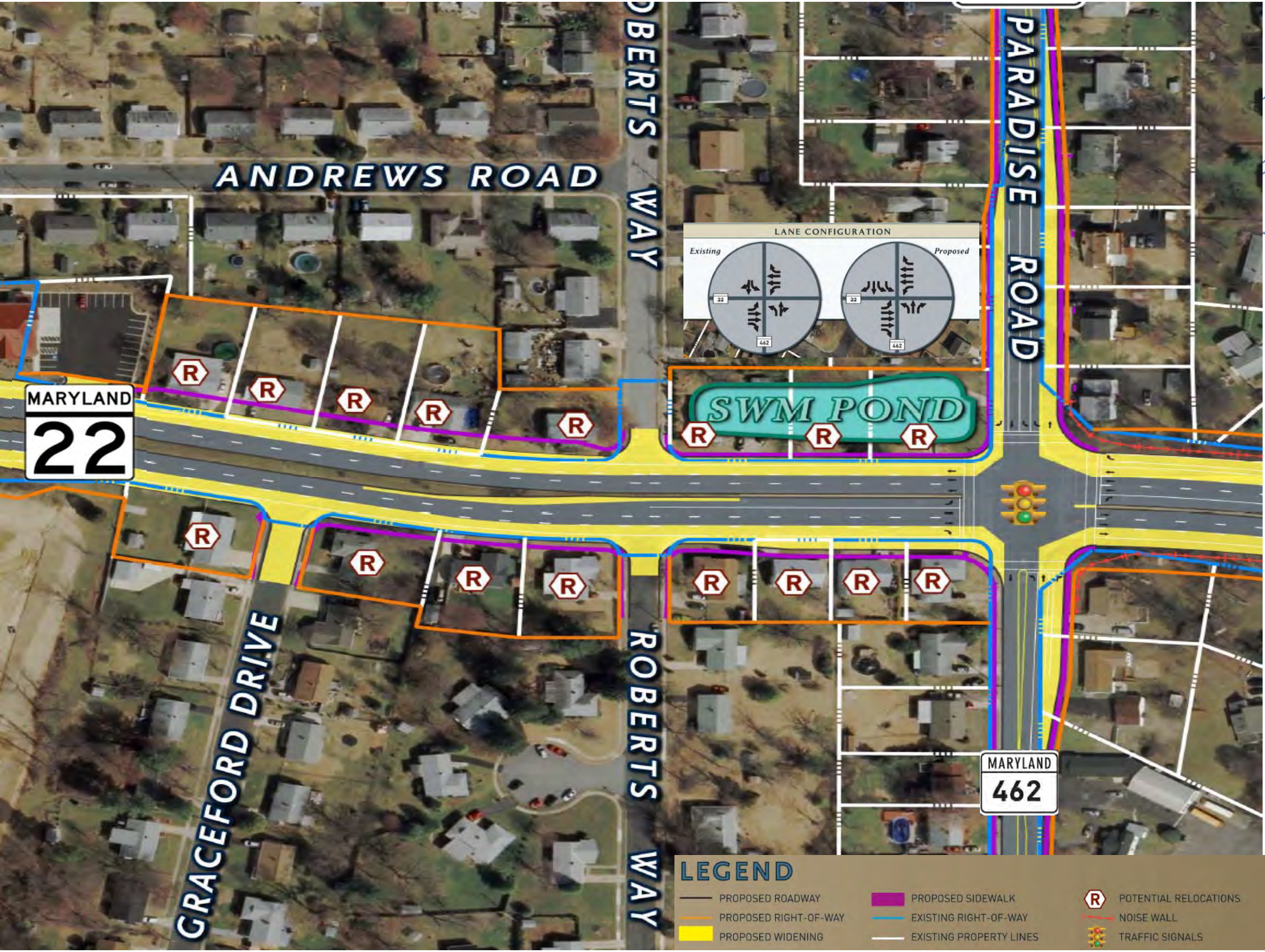
Air Quality Assessment

- TIP and long-range plan go through a process that compares estimated pollutants (emissions) from transportation projects to limits (budgets) set by the State.

BRAC Related Intersections Near Aberdeen Proving Ground

- MD 22 @ Beards Hill Road – widen to add through-lanes, turn lanes and sidewalks
- Between MD 462 and Beards Hill Road – widen to add through-lanes
- MD 22 @ MD 462 – widen to add through-lanes, turn lanes and sidewalks
- Bicycle compatible shoulders along MD 22 in accordance with SHA bike policy


MARYLAND
22
LANE CONFIGURATION
Beards Hill Road
Beards Hill Road
Proposed
22
LEGEND
PROPOSED ROADWAY
PROPOSED RIGHT-OF-WAY
PROPOSED SIDEWALK
EXISTING RIGHT-OF-WAY
POTENTIAL
NOISE WAL


ANDREWS ROAD
ROBERTS WAY
PARADISE ROAD
LANE CONFIGURATION
Existing
Proposed
22
462
SWM POND
MARYLAND
22
MARYLAND
462
GRACEFORD DRIVE
ROBERTS WAY
LEGEND
PROPOSED ROADWAY
PROPOSED RIGHT-OF-WAY
PROPOSED WIDENING
PROPOSED SIDEWALK
EXISTING RIGHT-OF-WAY
EXISTING PROPERTY LINES
POTENTIAL RELOCATIONS
NOISE WALL
TRAFFIC SIGNALS

BRAC Related Intersections Near Aberdeen Proving Ground

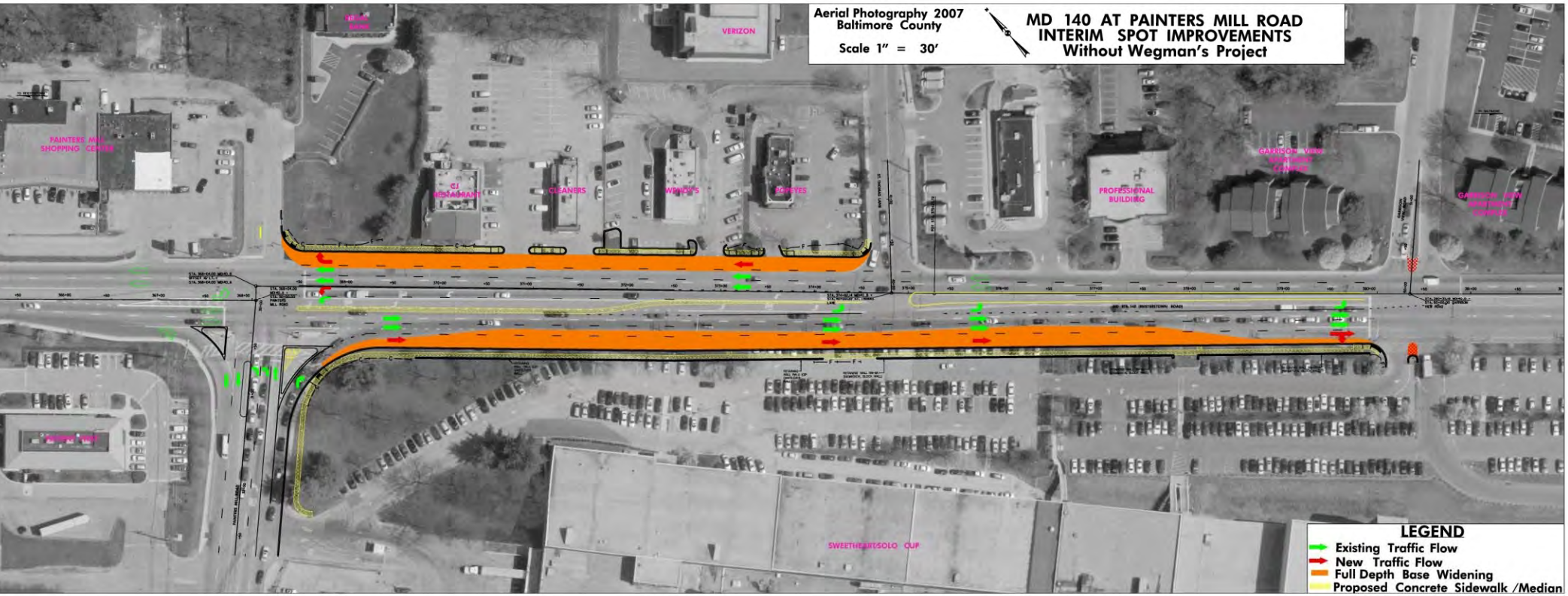
TIP Amendment Requests:

- Add Right-of-Way funding – Proposed purchase of property (partial, strip, and full) for this project.
- Add Funding – Utility work at Old Post Road

MD 140 @ Painters Mill Rd

- Funding - Design of intersection improvements to MD 140 at Painter's Mill Rd.
  - These improvements will take into consideration the expected growth in the Owings Mills area.
- Widen outside lanes to accommodate bicycles
- Add sidewalks in both directions throughout the limits of the project

MD 140 @ Painters Mill Rd



Baltimore Metropolitan Council

BRTB

Contact Information

For more information on these SHA projects:

Dami Kehinde
State Highway Administration
DKehinde@sha.state.md.us
410-545-5560

To submit comments:

Jason Biernat
Baltimore Metropolitan Council
comments@baltometro.org | www.baltometro.org/bboard
410-732-0500 x1048

BALTIMORE METROPOLITAN PLANNING ORGANIZATION

BALTIMORE REGIONAL TRANSPORTATION BOARD
RESOLUTION #13-1
AMENDMENT TO THE 2012 – 2015 BALTIMORE REGION
TRANSPORTATION IMPROVEMENT PROGRAM

WHEREAS, the Baltimore Regional Transportation Board is the designated Metropolitan Planning Organization for the Baltimore region, encompassing the Baltimore Urbanized Area, and includes official representatives of the cities of Annapolis and Baltimore, the counties of Anne Arundel, Baltimore, Carroll, Harford, and Howard, as well as representatives of the Maryland Department of Transportation, the Maryland Department of the Environment, the Maryland Department of Planning, and the Maryland Transit Administration; and

WHEREAS, the Baltimore Regional Transportation Board, as the Metropolitan Planning Organization for the Baltimore region, approved the 2012-2015 Transportation Improvement Program for the Baltimore region at its November 14, 2011 meeting, with federal approval on January 30, 2012; and

WHEREAS, federal regulations require that all transportation-related projects must be listed in the approved Transportation Improvement Program with accurate funding schedules in order to be eligible for federal funding; and

WHEREAS, the Transportation Improvement Program consists of projects included in, and in support of, the region's long-range transportation plan and ongoing short-range planning efforts; and

WHEREAS, the Maryland Department of Transportation, on behalf of the Maryland State Highway Administration, has requested approval of an amendment (see Attachment 1) to the 2012-2015 Transportation Improvement Program through the approved Transportation Improvement Program amendment process; and

WHEREAS, the Transportation Improvement Program, as amended, continues to display financial reasonableness and re-affirms the appropriate project selection criteria whereby all requirements for a Transportation Improvement Program in the Safe, Accountable, Flexible, Efficient, Transportation Equity, Act – A Legacy for Users are met; and

WHEREAS, *the Interagency Consultation Group has determined the MD 140 at Painter's Mill Road project is exempt from the requirement to determine conformity according to the Conformity Rule (40 CFR Parts 51 and 93); and*

***WHEREAS**, through a conformity determination performed by the Interagency Consultation Group, it has been determined that the BRAC Related Intersections near Aberdeen Proving Ground project is not exempt from conformity, and a regional emissions analysis was needed; the new analysis is complete; and the implementation of this project will not worsen the region's air quality or delay the timely attainment of national ambient air quality standards or interfere with implementation of any Transportation Control Measures; and*

***WHEREAS,** the proposed Transportation Improvement Program amendment was subject to a publicized 30-day review from June 22, 2012 to July 23, 2012 with a public meeting on July 18, 2012 to allow for comments.*

NOW, THEREFORE, BE IT RESOLVED that the Baltimore Regional Transportation Board, as the Metropolitan Planning Organization for the Baltimore region, approves the attached amendment to the 2012-2015 Transportation Improvement Program for the Baltimore region and finds it to conform to the applicable Maryland State Implementation Plan and requirements of the 1990 Clean Air Act Amendments.

I HEREBY CERTIFY that the Baltimore Regional Transportation Board as the Metropolitan Planning Organization for the Baltimore region approved the aforementioned resolution on July 31, 2012.

_____ _____

Date

Tony McClune, Chairman
Baltimore Regional Transportation Board

BRAC Related Intersections near Aberdeen Proving Ground

TIP Id #	65-0804-39	Year of Operation	2013
Agency	State Highway Administration	Project Type	Other
Project Category	Environmental/Safety	Functional Class	Collectors, major or minor
Conformity Status	Not Exempt	Physical Data	NA
CIP/CTP Page#	NA		

Description	Justification
Design and construct intersection improvements at key locations along access routes to Aberdeen Proving Ground. Bicycle and pedestrian facilities will be provided where appropriate. As the design phase progresses, decisions will be made regarding intersection locations and the extent of improvements based upon available construction funding. Proposed locations include: MD 22 at MD 462, MD 22 at Old Post Road, MD 22 at Beards Hill, and US 40 at MD 7/MD 159. **Amendment:** This amendment is requesting additional funds. The request includes $7.6 million of Surface Transportation Program funds for the Right-of-Way Phase to accommodate improvements at the MD 22 and MD 462 (Paradise Road) intersection. In addition to a lane in each direction, improvements include a new sidewalk adjacent to the northbound roadway on Beards Hill Road. The outside lanes on Beards Hill Road will be widened to accommodate bicycles. New sidewalks will be constructed on MD 462 and the outside lanes will be widened to accommodate bicycles. MD 22, west of MD 462, will include new sidewalks. An additional $1 million in Surface Transportation funds will allow for the relocation of utilities to accommodate improvements at the MD 22 and MD 132 (Old Post Road) intersection.	Improved access to Aberdeen Proving Ground is a vital component needed to accommodate the increase of employment as a result of BRAC. These intersection improvements will improve safety, capacity and operations in the near-term. The Harford County priority letters lists BRAC intersection improvements as the County's highest priority. These projects were indentified through the Governor's subcabinet on Base Realignment and Closure.

State Highway Administration **Environmental/Safety**

BRAC Related Intersections near Aberdeen Proving Ground

National Highway System

	Previous Requests		Annual Element		Federal Funding Requests ($000)						Project Totals
Phase	**Previous Federal Funds**	**Previous Matching Funds**	**FY 2012 Federal Funds**	**FY 2012 Matching Funds**	**FY 2013 Federal Funds**	**FY 2013 Matching Funds**	**FY 2014 Federal Funds**	**FY 2014 Matching Funds**	**FY 2015 Federal Funds**	**FY 2015 Matching Funds**	**Estimated Project Total**
CON			$ 5,226		$ 5,227						**$ 10,453**
OTH											**$ 0**
PE	$ 3,900	$ 1,688	$ 500	$ 200		$ 200					**$ 6,488**
PP											**$ 0**
ROW	$ 400		$ 300								**$ 700**
Totals	**$ 4,300**	**$ 1,688**	**$ 6,026**	**$ 200**	**$ 5,227**	**$ 200**	**$ 0**	**$ 0**	**$ 0**	**$ 0**	**$ 17,641**

Public Land Highways

	Previous Requests		Annual Element		Federal Funding Requests ($000)						Project Totals
Phase	**Previous Federal Funds**	**Previous Matching Funds**	**FY 2012 Federal Funds**	**FY 2012 Matching Funds**	**FY 2013 Federal Funds**	**FY 2013 Matching Funds**	**FY 2014 Federal Funds**	**FY 2014 Matching Funds**	**FY 2015 Federal Funds**	**FY 2015 Matching Funds**	**Estimated Project Total**
CON											**$ 0**
OTH											**$ 0**
PE	$ 1,406		$ 1,000		$ 475						**$ 2,881**
PP											**$ 0**
ROW											**$ 0**
Totals	**$ 1,406**	**$ 0**	**$ 1,000**	**$ 0**	**$ 475**	**$ 0**	**$ 0**	**$ 0**	**$ 0**	**$ 0**	**$ 2,881**

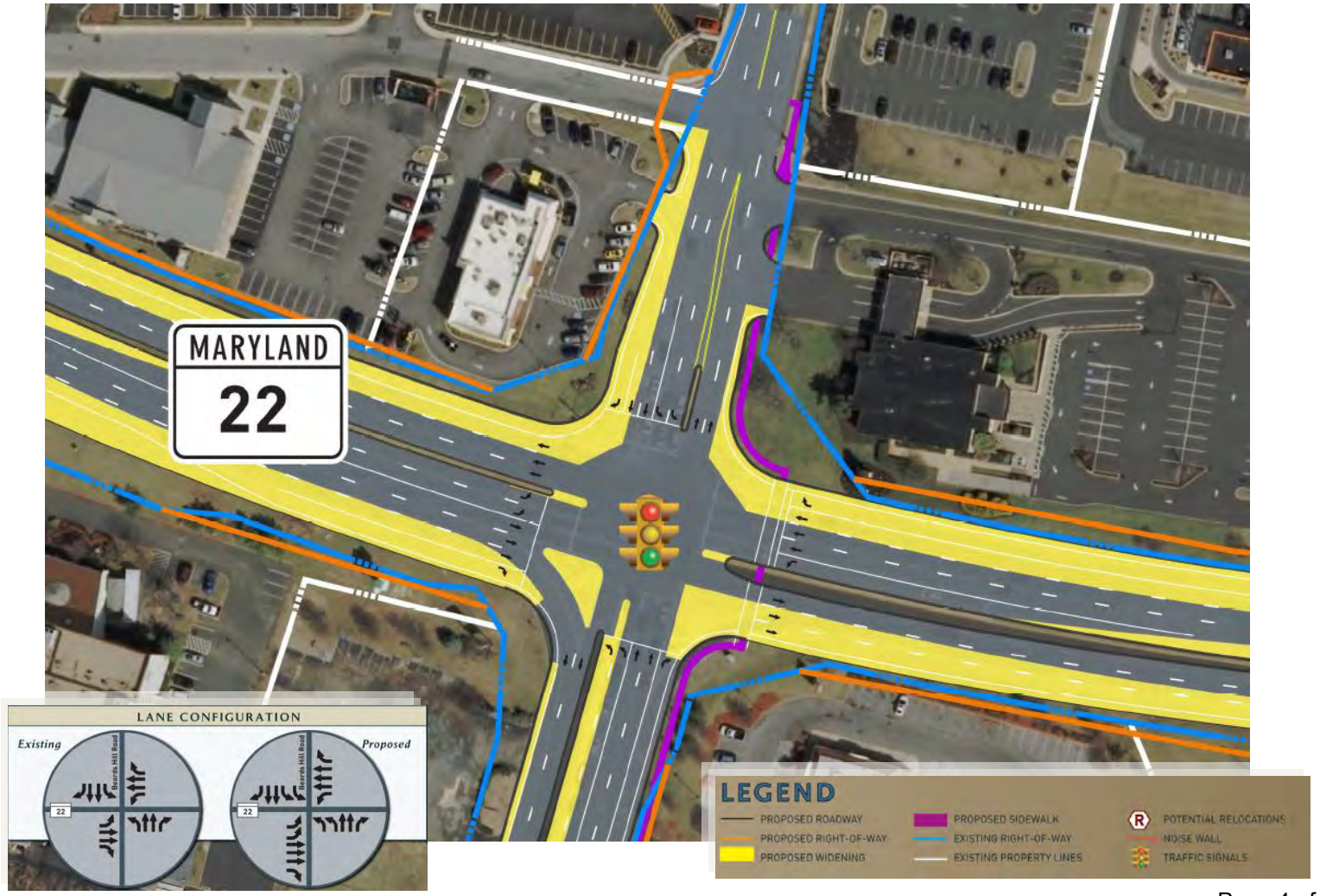
State Highway Administration **Environmental/Safety**

BRAC Related Intersections near Aberdeen Proving Ground

Surface Transportation Program (STP) – New Funding Source

	Previous Requests		Annual Element		Federal Funding Requests ($000)						Project Totals
Phase	**Previous Federal Funds**	**Previous Matching Funds**	**FY 2012 Federal Funds**	**FY 2012 Matching Funds**	**FY 2013 Federal Funds**	**FY 2013 Matching Funds**	**FY 2014 Federal Funds**	**FY 2014 Matching Funds**	**FY 2015 Federal Funds**	**FY 2015 Matching Funds**	**Estimated Project Total**
CON	$ 5,586	$ 1,576									**$ 7,162**
OTH					$ 1,000						**$ 1,000**
PE		$ 2,978									**$ 2,978**
PP											**$ 0**
ROW	$ 3,900	$ 1,100			$ 3,000		$ 3,000		$ 1,600		**$ 12,600**
Totals	**$ 9,486**	**$ 5,654**	**$ 0**	**$ 0**	**$ 4,000**	**$ 0**	**$ 3,000**	**$ 0**	**$ 1,600**	**$ 0**	**$ 23,740**

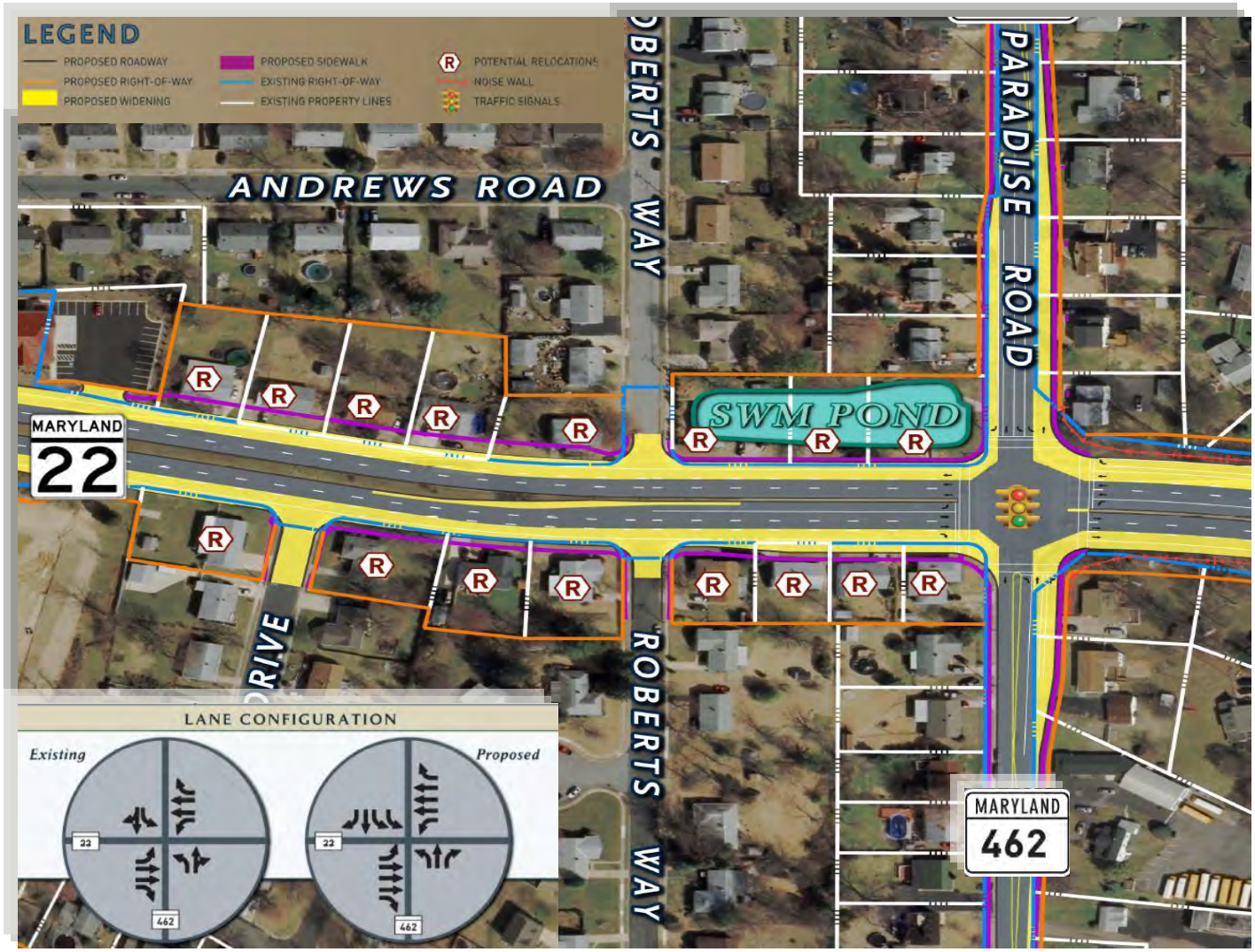
MD 22 at Beards Hill Road



Page 4 of 5

State Highway Administration **Environmental/Safety**

MD 22 at MD 462 (Paradise Road)



State Highway Administration **Highway Preservation**

MD 140 at Painter's Mill Road

TIP Id #	63-1203-19	Year of Operation	2016
Agency	State Highway Administration	Project Type	Other
Project Category	Highway Preservation	Functional Class	Principal arterial
Conformity Status	Exempt	Physical Data	0.23 miles
CIP/CTP Page#	NA	Completed Project Cost	$10 million

Description	Justification
This project will identify more efficient traffic operations at the MD 140 and Painter's Mill Road Intersection. This is a breakout of the MD 140: Garrison View Road to north of Owings Mills Boulevard (TIP ID 63-0802-41) project which last requested funding for the Right-of-Way and Preliminary Engineering Phases in the 2008 - 2012 TIP. **Amendment:** This is a new project to the 2012 – 2015 TIP and is requesting $1.1 million of National Highway System funds for the Preliminary Engineering Phase.	The purpose of this project is to relieve current and anticipated traffic congestion based on background growth and proposed development, including Transit Oriented Development at the Owings Mills Metro Station. The project will address safety and operational concerns along MD 140. It will help reduce overall delays along the corridor and enhance vehicular and pedestrian safety. This is a top transportation priority project for Baltimore County.

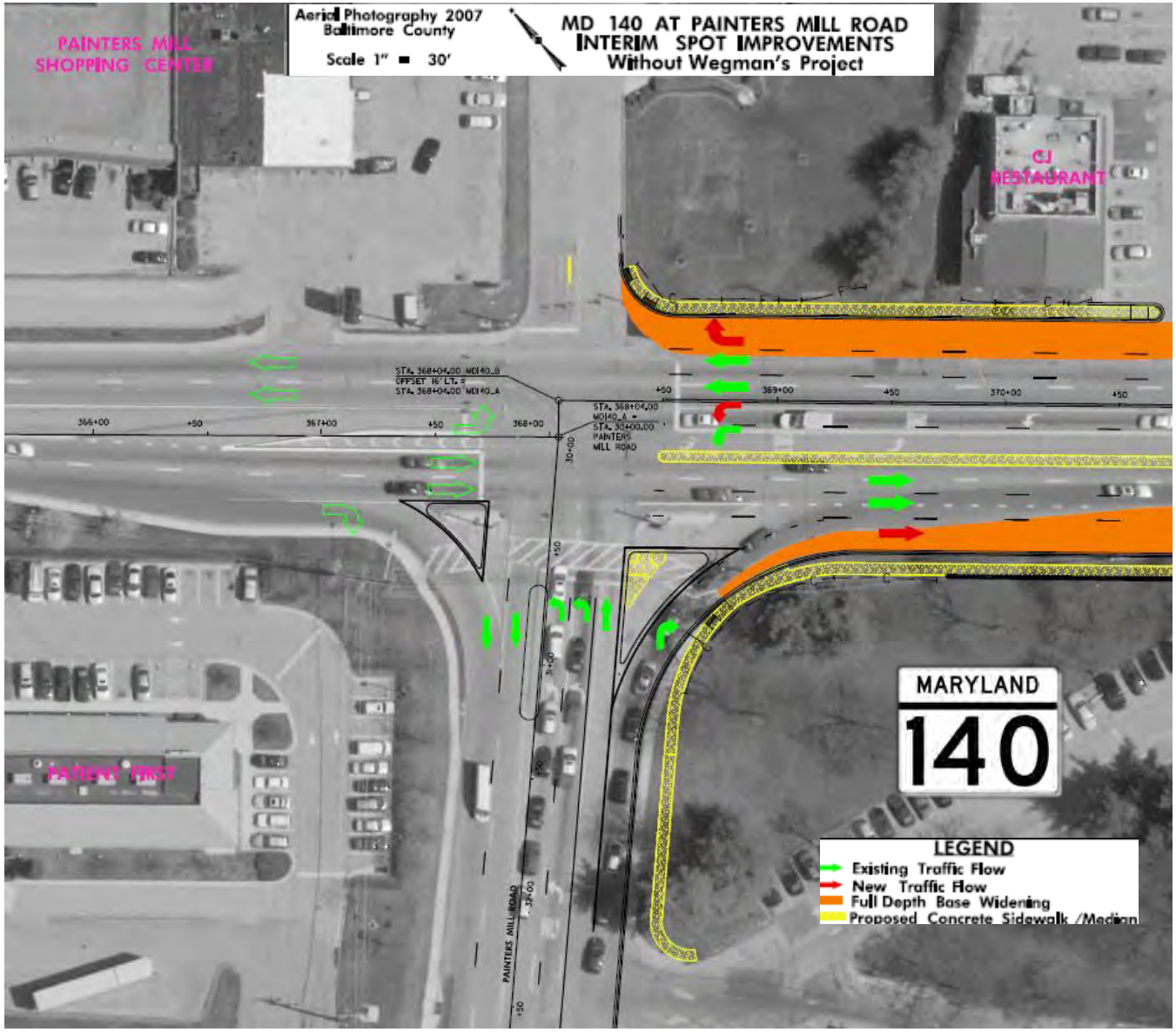
State Highway Administration **Highway Preservation**

MD 140 at Painter's Mill Road

National Highway System

	Previous Requests		Annual Element		Federal Funding Requests ($000)						Project Totals
Phase	**Previous Federal Funds**	**Previous Matching Funds**	**FY 2012 Federal Funds**	**FY 2012 Matching Funds**	**FY 2013 Federal Funds**	**FY 2013 Matching Funds**	**FY 2014 Federal Funds**	**FY 2014 Matching Funds**	**FY 2015 Federal Funds**	**FY 2015 Matching Funds**	**Estimated Project Total**
CON											**$ 0**
OTH											**$ 0**
PE					$ 600		$ 500				**$ 1,100**
PP											**$ 0**
ROW											**$ 0**
Totals	**$ 0**	**$ 0**	**$ 0**	**$ 0**	**$ 600**	**$ 0**	**$ 500**	**$ 0**	**$ 0**	**$ 0**	**$ 1,100**

MD 140 at Painter's Mill Road



Baltimore Metropolitan Council

Search

Agenda 07/31/2012: Baltimore Metropolitan Planning Organization

240th MEETING OF THE BALTIMORE REGIONAL TRANSPORTATION BOARD
TUESDAY, JULY 31, 2012
9:00 A.M.

BALTIMORE METROPOLITAN COUNCIL
OFFICES @ MCHENRY ROW
1500 WHETSTONE WAY, SUITE 300
BALTIMORE, MD 21230 Map, directions, transit info >>> (/contact-us/directions-to-bmc)

AGENDA

1. APPROVAL OF MAY 22, 2012 (/minutes/BRTB120522min.pdf) AND JUNE 27, 2012 (/minutes/BRTB120627min.pdf) MINUTES

2. PUBLIC PARTICIPATION OPPORTUNITY (15 Minutes)

3. REPORT ON PUBLIC COMMENTS

4. REPORT FROM CITIZENS ADVISORY COMMITTEE

5. REPORT FROM THE TECHNICAL COMMITTEE

6. REPORT FROM THE INTERAGENCY CONSULTATION GROUP

ACTION ITEMS

7. APPROVAL OF A RESOLUTION TO AMEND THE FY 2012-2015 TRANSPORTATION IMPROVEMENT PROGRAM (5 Minutes)

The BRTB will be asked to approve Resolution #13-1 (/BRTB/BRTBRes13-1.pdf) in support of two amendments: BRAC/APG and Reisterstown Road operational improvements .

INFORMATIONAL ITEMS

8. BRIEFING ON MAP-21, THE FEDERAL SURFACE TRANSPORTATION ACT (15 Minutes)

BMC staff will provide an early briefing on some of the provisions of the newly enacted Federal Surface Transportation Act known as MAP-21.

9. OTHER BUSINESS

Next Meeting

August 28, 2012

REVISED PARKING INSTRUCTIONS AS OF MAY 2012

Meeting attendees will continue to park on the ground floor in the parking garage immediately adjacent to the office building across the water tower plaza (the West Parking Garage). Spaces in this garage are limited to two hour parking. As of **MAY 4, 2012**, you will no longer be required to get a parking pass from security. If a meeting is scheduled to last longer than two hours, BMC will forward that information to the parking firm.

Accommodations

Accommodations during meetings for qualified individuals with disabilities will be provided upon request. Please contact Monica Haines Benkhedda at 410-732-0500, ext. 1047, one week in advance for provisions of appropriate auxiliary aid and services. Hearing impaired individuals may also request assistance through the Maryland State Relay Service at (TTY/TDD) 1-800-735-2258.

Weather Alert

In the event that Baltimore County schools are closed system-wide, all meetings (AM and PM) of the Baltimore Regional Transportation Board and its subcommittees will be cancelled for that day. If the school system closes during the day, any meetings scheduled for the remainder of the day or evening are cancelled. Delays in the opening of the school system do not impact any committee or their scheduled time.