APPENDIX A **PUBLIC MEETINGS AND COMMENTS**

This page intentionally left blank

Fort Monroe Base Closure
BRAC EIS

Scoping Meeting
Summary Report

Prepared for

U.S. Army Corps of Engineers

Mobile District

Prepared by

Marstel-Day, LLC
Fredericksburg, VA

November 2008

Contents

SECTIONS

1.0 Introduction

2.0 Public Notification of Scoping Meeting

3.0 Public Scoping Meeting

4.0 Scoping Comments

- Agency
- Public

5.0 Scoping Comments for the Environmental Assessment (January 30, 2007) ?

- Agency
- Public

APPENDICES

Appendix A: Federal Register – Notice of Intent

Appendix B: Legal Advertising of Public Meeting

Appendix C: Letter of Invitation to Federal, State and Local Agencies and Officials, Tribes, and Other Potentially Interested Parties

Appendix D: Scoping Meeting Room Layout

Appendix E: Scoping Meeting Sign-In Sheet

Appendix F. Scoping Comments Received by Email

Appendix G. Scoping Meeting Transcript

Appendix H. Scoping Comments for Environmental Assessment (January 30, 2007)

Add an Appendix which references Scoping Meeting Exhibits and Handouts (Remove these from the PIP and insert here)

1.0 Introduction

This Scoping Meeting Summary Report summarizes the notification and issues raised at the public scoping meeting conducted in support of the Fort Monroe Base Realignment and Closure (BRAC) 2005 Environmental Impact Statement (EIS). Army guidance initially indicated that the closure of Fort Monroe would be adequately covered by an Environmental Assessment (EA) but comments received at the EA Scoping Meeting indicated the potential for significant adverse impacts. This led the Army to decide to prepare and EIS for the proposed action. The purpose of the EIS Scoping Meeting was to elicit comments that would help establish the scope of the EIS.

Through the Virginia Department of Environmental Quality (DEQ), agencies were given the option of participating in a separate meeting from the public scoping meeting, but DEQ's head of the Environmental Impact Review office, Ms. Ellie Irons, recommended that one combined meeting would be sufficient opportunity for agencies to be briefed on the EIS and offer their comments along with the public.

Background

Fort Monroe is a 570-acre U.S. Army garrison located at the southeastern tip of Virginia at the entrance to the harbor of Hampton Roads. Its hallmark is a stone fort and moat; the largest ever constructed in the United States. Construction began in 1819 and was completed in 1834, but the first of several others to occupy the site dates back to 1609 when a timber and earthwork stockade, known as Fort Algernourne, was completed. The Fort Monroe property is almost completely surrounded by the waters of the lower Chesapeake Bay, the harbor of Hampton Roads and Mill Creek. The installation's northern extension ties into land in the Hampton, Virginia community of Buckroe Beach. More distant is historic Williamsburg, located about 30 miles northwest of Fort Monroe. Richmond is about 75 highway miles northwest of Fort Monroe, and 175 highway miles to the north is Washington, D.C.

In its 2005 report to the President the BRAC Commission recommended the closure of Fort Monroe. Pursuant to that recommendation, all Army missions at Fort Monroe must cease or be relocated. The Commission recommended actions for Fort Monroe, Virginia are:

(a) Close Fort Monroe, Virginia and relocate U.S. Army Training and Doctrine Command Headquarters, the Installation Management Command Northeast Region Headquarters, the U.S. Army Network Enterprise Technology Command Northeast Region Headquarters and the Army Contracting Agency Northern Region Office to Fort Eustis, Virginia.

(b) Relocate the U.S. Army Accessions Command and U.S. Army Cadet Command, located on Fort Monroe, to Fort Knox, Kentucky.

For the EIS, the proposed action is to dispose of the surplus federal property. The Army has identified two disposal alternatives (early transfer and traditional), a caretaker status alternative, and the no action alternative. Three reuse scenarios, based on a range of redevelopment intensity, encompass the Fort Monroe Federal Area Development Authority (FMFADA) reuse plan and are evaluated as secondary actions. Future reuse of Fort Monroe property will be analyzed in the context of land use intensity categories. Furthermore, the EIS addresses reuse of property that will revert back to the Commonwealth of Virginia as part of the reuse plan. The Army expresses no preference with respect to any reuse scenarios.

2.0 Public Notification of Scoping Meeting

The Notice of Intent (NOI) for preparation of an EIS for Fort Monroe was published in the Federal Register on September 19, 2008. It is included in this summary report as Appendix A.

Legal advertisements (Appendix B) were published in the two largest circulation newspapers in the regional vicinity of Fort Monroe: The Virginian-Pilot and the Daily Press. Despite simultaneously requesting to both newspapers that the ads be placed on October 18, the ad appeared in the Virginian-Pilot on the 18th and in the Daily Press on the 22nd.

A letter of invitation to the Scoping Meeting was sent to 90 addresses by the Garrison Commander (Appendix C). Invitees included federal, state and local agencies and officials, Native American tribes, and other potentially interested parties.

3.0 Public Scoping Meeting

The Fort Monroe Public Scoping Meeting was conducted on October 28, 2008 from 7:00 PM to 9:00 PM in the Virginia Room of Northampton Community Center located at 1435-A Todds Lane, Hampton, Virginia 23665 (Appendix D). The room was available to the public prior to the published starting time and was not closed until 9:00, after all guests had vacated.

In attendance beyond those representing the Army and the Scoping Meeting support personnel were Virginia Department of Transportation (VDOT) staff (2) and City of Hampton, Planning (1). Also present were the Buckroe Civic Association (1), Rain for Rent (1), and private citizens (5). The private citizen group included a Hampton city councilwoman. The completed sign-in sheet is provided as Appendix E.

COL Anthony D. Reyes, Fort Monroe Garrison Commander, presented his opening remarks at approximately 7:15 PM and was followed by the main speaker, Mr. Richard Muller (U.S. Army contractor with Marstel-Day, LLC), who presented the Army's decision under NEPA to prepare an EIS describing the Army plan for disposal of Federal property at Fort Monroe and the FMFADA reuse-plan as a secondary action that would be analyzed as the primary reuse alternative. Following formal remarks, attendees were invited to present their comments.

The first to speak, Mr. Sam Martin, questioned whether or not the Army had prepared or published a NAPA (NEPA Analysis Plan of Action). A response was provided by Ms. Robin Mills (Chief, Directorate of Public Works) that the NOI was published in the Federal Register on September 19, 2008.

Another individual wanted to be sure that the Army does not dismiss the possibility of National Park Service (NPS) creating a National Park at Fort Monroe. NPS has already completed (May 2008) its Reconnaissance Study and the next step would be for Congress to authorize a Special Resource Study. The Reconnaissance Study recommended "that Congress defers any authorization of a Special Resource Study until the NPS can review the Department of Defense (DoD) approved Fort Monroe Reuse Plan to determine if any potential role for the NPS is likely to meet the feasibility criterion." It is not the role of DoD to approve or disapprove the plan, but only to consider it as an alternative. So, it is unclear how this will progress, but without the National Park alternative being definitively eliminated, an alternative that includes Fort Monroe as a historic tourism destination should be considered in the EIS. Taking that approach would eliminate potential controversy when the Draft EIS goes public.

Also from the floor, Hampton councilwoman Angela Leary expressed her concerns regarding offshore UXO (UneXploded Ordnance), both in Mill Creek and in the Chesapeake Bay. She said the Army should investigate that concern and, if appropriate, present mitigation measures in the EIS. Later, off microphone, Mrs. Leary dictated a statement to the court reporter requesting that the Army establish an agreement with the Commonwealth of Virginia similar to the agreement with the State of Maryland for protection of the Chesapeake Bay.

Before and after the formal speaking presentations, attendees were invited to browse the resource display panels and engage in discussion with the resource area specialists. Display panels were 2 feet wide and 3 feet high, bonded to foam core board and placed on easels. The subjects of panels were:

- Land Reversion Map
- Post Features Map
- Coastal Zone Management Areas and Wetlands
- Cultural Resources
- Transportation Study Area

FMFADA Reuse Zones

Attendees were provided a handout of the NEPA Process for Fort Monroe EIS and a Public Comment form. Beyond the expiring opportunity for comments from the floor and to the court reporter, they were clearly presented the methods by which they could provide further comment. No written comments were dropped in the comment box and no comments were received by surface mail, but 110 comments were received by way of email (Appendix F).

4.0 Scoping Comments

Public Comments

Comments received at the Scoping Meeting are discussed in Section 3.0 above and were concerning the NAPA, the possibility of offshore UXO, and development of Fort Monroe as a National Park. The National Park comment was the overwhelming theme in nearly every comment received by email. It can only be concluded that many of these comments were forwarded by individuals on the *Citizens for Fort Monroe National Park* mailing list who were sent a request to submit the following:

"I ask that the Fort Monroe EIS process involve at least these two things:

- Thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
- A plan for substantial public participation in the EIS process."

These exact words, or words to the same effect, were repeated in well over half of the emails received.

Traffic was also presented as an issue, but it was limited to only two respondents.

In one of two emails, an individual, Mr. Sam Martin, presented comments on behalf of the *Citizens for a Fort Monroe National Park.* These extensive comments, which are presented at the end of Appendix F, do not present any new issues that are not already being considered in the EIS.

Agency Comments

Scoping comments were received from Virginia Department of Transportation. VDOT raised six issues and that letter transmitting those concerns is the first item in Appendix F. No comments were received from any federal, or local agencies, officials or Native American tribes.

Method for Controlling Parachute Opening" issued September 2, 2008. This patent has been assigned to the United States Government as represented by the Secretary of the Army.

FOR FURTHER INFORMATION CONTACT: Mr. Jeffrey DiTullio at U.S. Army Soldier Systems Center, Kansas Street, Natick, MA 01760, Phone: (508) 233–4184 or *e-mail: Jeffrey.Ditullio@us.army.mil.*

SUPPLEMENTARY INFORMATION: Any licenses granted shall comply with 35 U.S.C. 209 and 37 CFR Part 404.

Brenda S. Bowen,

Army Federal Register Liaison Officer.

[FR Doc. E8–21924 Filed 9–18–08; 8:45 am]

BILLING CODE 3710–08–P

DEPARTMENT OF DEFENSE

Department of the Army

Notice of Intent To Prepare an Environmental Impact Statement (EIS) for Disposal and Reuse of Fort Monroe, VA, Resulting From the 2005 Base Closure and Realignment Commission's Recommendations

AGENCY: Department of the Army, DoD.

ACTION: Notice of Availability.

SUMMARY: The Department of the Army intends to prepare an EIS for the disposal and reuse of Fort Monroe, Hampton, Virginia. Pursuant to the BRAC law, Fort Monroe is to close by September 14, 2011. Other actions included in the closing of Fort Monroe are relocating the Headquarters, U.S. Army Training and Doctrine Command (TRADOC); the Installation Management Command (IMCOM) Northeast Region; the U.S. Army Network Enterprise Technology Command (NETCOM) Northeast Region; and the Army Contracting Agency Northeast Region Office to Fort Eustis, Virginia. The U.S. Army Accessions Command and the U.S. Army Cadet Command will be relocated to Fort Knox, Kentucky. These relocations have been or will be addressed in separate National Environmental Policy Act (NEPA) documents for those locations.

DATES: The scoping meeting for the EIS will be held on October 28, 2008, 7 p.m. to 9 p.m., Northampton Community Center, 1435 Todds Lane, Hampton, VA 23666.

FOR FURTHER INFORMATION CONTACT: Ms. Jennifer Guerrero; phone: (757) 788–5363; e-mail: *jennifer.lee.guerrero@us.army.mil.*

SUPPLEMENTARY INFORMATION: Fort Monroe is a 570-acre U.S. Army Garrison located at the southeastern tip of the Virginia Lower Peninsula between Hampton Roads and the Lower Chesapeake Bay. The hallmark of Fort Monroe is its stone fortress and moat.

The proposed action (Army primary action) is to dispose of the surplus property generated by the BRAC-mandated closure of Fort Monroe. Reuse of Fort Monroe by others is a secondary action resulting from disposal. The Army has identified two disposal alternatives (early transfer and traditional disposal), a caretaker status alternative, and the no action alternative (as required by NEPA). The EIS will analyze the impact of each reuse alternative upon a wide range of environmental resource areas including, but not limited to, air quality, traffic, noise, biological resources, water resources, geology and soils, cultural resources, socioeconomic, utilities, land use, aesthetics and visual resources, hazardous and toxic substances, and cumulative environmental effects.

The Army will conduct an environmental impact analysis that will focus on the effects of closure and reuse. One preliminary finding is that transportation impacts will have the most significant effect, with or without a major tourism component in the reuse plan. Also, at this early stage, impacts to air quality, infrastructure, and land use are not considered significant. With respect to cultural resources, significant adverse impacts are possible, but these can be mitigated by provisions contained in the Programmatic Agreement between the Army and the Virginia Department of Historic Resources.

Additional resources and conditions may be identified as a result of the scoping process initiated by this NOI. Other opportunities for public participation will be announced in the respective local news media. The public will be invited to participate in scoping activities for the EIS and comments from the public will be considered before any action is taken to implement the disposal and reuse of Fort Monroe.

Dated: September 12, 2008.

Addison D. Davis, IV,

Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health).

[FR Doc. E8–21807 Filed 9–18–08; 8:45 am]

BILLING CODE 3710–08–M

DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

Public Scoping Meetings for Update of the Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin in Georgia, Florida, and Alabama

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Supplement to Notice of Intent.

SUMMARY: The U.S. Army Corps of Engineers (Corps), Mobile District, issued a Notice of Intent (NOI) in the **Federal Register** (73 FR 9780) published on February 22, 2008, describing the preparation of a Draft Environmental Impact Statement (EIS), as required by the National Environmental Policy Act (NEPA) to address the proposed update of the Water Control Manual (WCM) for the Apalachicola-Chattahoochee-Flint (ACF) River Basin located in Georgia, Florida, and Alabama. The Corps will hold five public scoping meetings during the month of October as part of its review and update of the WCM for the ACF River Basin. The public is invited to attend the scoping meetings which will provide information on the WCM update process and afford the opportunity to receive input from the public about their issues and concerns regarding that process. All five public meetings will be held using an open house format, allowing time for participants to review specific information and to provide comments to the resource staff attending the meeting.

DATES: *See* **SUPPLEMENTARY INFORMATION** section for meeting dates.

ADDRESSES: *See* **SUPPLEMENTARY INFORMATION** section for meeting addresses.

FOR FURTHER INFORMATION CONTACT: Questions about the manual update or NEPA process can be answered by: Mr. Brian Zettle, Biologist, Environment and Resources Branch, Planning and Environmental Division, U.S. Army Engineer District-Mobile, Post Office Box 2288, Mobile, AL 36628–0001; Telephone (251) 690–2115; or delivered by electronic facsimile at (251) 694–3815; or e-mail: *brian.a.zettle@.usace.army.mil.* You may also request to be included on the mailing list for public distribution of notices, meeting announcements and documents.

SUPPLEMENTARY INFORMATION: The meeting dates are:

1. October 20, 2008, 5 p.m.–8 p.m. (EDT), Apalachicola, FL.

THE VIRGINIAN-PILOT
NORFOLK, VIRGINIA
AFFIDAVIT OF PUBLICATION

The Virginian-Pilot

MULLER, RICHARD
342 N FIRST ST
HAMPTON VA 23664

REFERENCE: 39090728
19447084 FORT MONROE PUBLIC N

State of Virginia
City of Norfolk

This day, Jacqueline Whitfield, personally appeared before me and, after being duly sworn, made oath that:
1) She is affidavit clerk of The Virginian-Pilot, a newspaper published by The Virginian-Pilot Media Companies, LLC, in the cities of Norfolk, Portsmouth, Chesapeake, Suffolk, and Virginia Beach, Commonwealth of Virginia and in the state of North Carolina 2) That the advertisement hereto annexed has been published in said newspaper on the date stated.

PUBLISHED ON: 10/18

TOTAL COST: 560.70 AD SPACE: 126 LINE
FILED ON: 10/24/08

Legal Affiant Jacqueline Whitfield

Subscribed and sworn to before me in my city and state on the day and year aforesaid ~~this~~ 28 of October, in the year of 2008. (NRN:7145124)

Notary: [signature] My commission expires October 31, 2011.

FORT MONROE PUBLIC NOTICE OF SCOPING MEETING

Department of the Army Invites Public Input for the Environmental Impact Statement (EIS) of the Fort Monroe Base Realignment and Closure (BRAC) Action

When: 7:00 p.m.-9:00 p.m. on October 28, 2008
Where: Northampton Community Center, 1435 Todds Lane, Hampton, VA 23666; (757) 825-4805
(http://www.hampton.gov/Parks/north_hampton_cc.html)

In compliance with the National Environmental Policy Act, the Department of the Army, Fort Monroe will conduct a Scoping Meeting on October 28, 2008, at the location and time listed above to solicit input on the scope of the EIS for the BRAC action for Fort Monroe, Virginia. The purpose of the Scoping Meeting is to seek public input on issues that should be addressed in the EIS to augment comments previously received by the City of Hampton, the Local Redevelopment Authority (LRA), and at the January 30, 2007 Fort Monroe Environmental Assessment Scoping Meeting. Federal, state, and local agencies, federally recognized tribes, individuals, and organizations that have an interest are urged to participate. The meeting is open to the public and, after opening statements, will be held open-house style. Members of the public may attend at their convenience during the above time period.

The Department of the Army, Fort Monroe invites open comment on the activities proposed to implement the BRAC Commission's recommendation pertaining to the closure of Fort Monroe. The EIS will evaluate the potential environmental and socioeconomic effects associated with the proposed action. The EIS will consider a range of alternatives to accommodate the BRAC Commission's recommendation, including proposals submitted by the LRA that are available online at www.FMFADA.com

The Army encourages comments from all citizens and agencies. Written questions or comments concerning the development of the EIS will be accepted at the Scoping Meeting or may be submitted to Ms. Jennifer Guerrero, Directorate of Public Works, 318 Cornog Lane, Fort Monroe, VA 23651. Written comments on the scope of the EIS must be received by November 12, 2008. For any questions about the Scoping Meeting, please inquire at (757) 788-5363.

VP October 18, 2008 19447084

Richard Muller

From: Legal Ads [Legals@pilotonline.com]
Sent: Thursday, October 16, 2008 3:48 PM
To: 'rm@marstel-day.com'
Subject: RE: Legal Ad for Publication
Attachments: 19447084.pdf

Your ad number is 19447084, and your ad total is $590.70, which includes a $30 on-line publication, and is attached.
The ad is scheduled for October 18.

Thank you,

Amber Kelly
The Virginian-Pilot
Legal Advertising Representative
Phone: 757-446-4662
Fax: 757-446-2019
legals@pilotonline.com

From: Richard Muller [mailto:rm@marstel-day.com]
Sent: Thursday, October 16, 2008 3:15 PM
To: Legal Ads; legalads@dailypress.com
Subject: Legal Ad for Publication

Hi Amber and Cynthia,

I've attached an ad for placement in BOTH the Virginian-Pilot and the Daily Press. (Just wanted you to know that I'm not shopping prices here.)

It should appear one day only, and Saturday would be preferable to Sunday.

My name and telephone number appear in the signature block below and my mailing/billing address is:

342 North First St.
Hampton, VA 23664-1448

Thank you for attention to this.

Sincerely,

Richard Muller
Marstel-Day, LLC
www.marstel-day.com
757.439.8147

The Virginian-Pilot

ADVERTISING INVOICE AND STATEMENT 2141830

STATEMENT PERIOD	ADVERTISER/CLIENT NAME
10/18/08 - 10/24/08	MULLER, RICHARD

L	TOTAL AMOUNT DUE	UNAPPLIED AMOUNT	DUE DATE
	590.70		Due Upon Receipt

CURRENT NET AMOUNT DUE	30 DAYS	60 DAYS	OVER 90 DAYS
590.70	.00	.00	.00

PAGE#	BILLING DATE	BILLED ACCOUNT NAME AND ADDRESS	REMITTANCE ADDRESS
1	10/24/08	MULLER, RICHARD 342 N FIRST ST HAMPTON VA 23664	The Virginian-Pilot PO Box 627 Norfolk, VA 23501-1388
BILLED ACCOUNT NUMBER: 39090728			
ADVERTISER/CLIENT NUMBER			

CHECK NUMBER _____ PAYMENT AMOUNT _____

00021418300000059070 3

PLEASE DETACH AND RETURN UPPER PORTION WITH YOUR REMITTANCE

DATE	NEWSPAPER REFERENCE	DESCRIPTION - OTHER COMMENTS/CHARGES	DIMENSIONS BILLED UNITS	TIMES RUN RATE	GROSS AMOUNT	NET AMOUNT
10/17		BALANCE FORWARD				0.00
10/18	PUBLICATION: 19447084 10/18	The Virginian-Pilot - Full Run FORT MONROE PUBLIC NOTICE O 3526 19447084 Richard	2x63L 126L	1	560.70	
		Publication Totals: $560.70				560.70
10/18	PUBLICATION: 19447084 10/18	Online Publication VP - Full Run FORT MONROE PUBLIC NOTICE O 3526 19447084 Richard	2x63L 126L	1	30.00	
		Publication Totals: $30.00				30.00

BILLING QUESTIONS - 757-446-2717. CLASSIFIED ADVERTISING- 757-622-1455. EMAIL - BILLINGQUESTIONS@PILOTONLINE.COM

STATEMENT OF ACCOUNT AGING OF PAST DUE AMOUNTS

* UNAPPLIED AMOUNTS ARE INCLUDED IN TOTAL AMOUNT

CURRENT NET AMOUNT	30 DAYS	60 DAYS	OVER 90 DAYS	UNAPPLIED AMOUNT	TOTAL AMOUNT DUE
590.70	.00	.00	.00		590.70

The Virginian-Pilot

INVOICE NUMBER	ADVERTISER INFORMATION			
	BILLING PERIOD	BILLED ACCOUNT NUMBER	ADVERTISER/ACCOUNT NUMBER	ADVERTISER/CLIENT NAME
2141830	10/18/08 - 10/24/08	39090728		MULLER, RICHARD

COMMONWEALTH OF VIRGINIA
CITY OF NEWPORT NEWS

This day, personally appeared before me, George Hunt, and made oath as follows:

1. He is employed in the Office Services Department of the Daily Press, Inc., a newspaper publishing company in the City of Newport News, Virginia.

2. The attached advertisement was published for ___1___ insertions in the *Daily Press,* commencing on:

10/21/08 and ending on *10/21/08*.

George Hunt

George Hunt

10/22/08
Date

Subscribed and sworn before me

This 22nd day of Oct., 2008.

My commission expires: March 31, 2009

Rita Greene

Rita Greene
NOTARY PUBLIC

Registration Number: 356990

FORT MONROE PUBLIC NOTICE OF SCOPING MEETING

Department of the Army Invites Public Input for the Environmental Impact Statement (EIS) of the Fort Monroe Base Realignment and Closure (BRAC) Action

When: 7:00 p.m.-9:00 p.m. on October 28, 2008
Where: Northampton Community Center, 1435 Todds Lane, Hampton, VA 23666; (757) 825-4805
(http://www.hampton.gov/Parks/north_hampton_cc.html)

In compliance with the National Environmental Policy Act, the Department of the Army, Fort Monroe will conduct a Scoping Meeting on October 28, 2008, at the location and time listed above to solicit input on the scope of the EIS for the BRAC action for Fort Monroe, Virginia. The purpose of the Scoping Meeting is to seek public input on issues that should be addressed in the EIS to augment comments previously received by the City of Hampton, the Local Redevelopment Authority (LRA), and at the January 30, 2007 Fort Monroe Environmental Assessment Scoping Meeting. Federal, state, and local agencies, federally recognized tribes, individuals, and organizations that have an interest are urged to participate. The meeting is open to the public and, after opening statements, will be held open-house style. Members of the public may attend at their convenience during the above time period.

The Department of the Army, Fort Monroe invites open comment on the activities proposed to implement the BRAC Commission's recommendation pertaining to the closure of Fort Monroe. The EIS will evaluate the potential environmental and socioeconomic effects associated with the proposed action. The EIS will consider a range of alternatives to accommodate the BRAC Commission's recommendation, including proposals submitted by the LRA that are available online at www.FMFADA.com

The Army encourages comments from all citizens and agencies. Written questions or comments concerning the development of the EIS will be accepted at the Scoping Meeting or may be submitted to Ms. Jennifer Guerrero, Directorate of Public Works, 318 Cornog Lane, Fort Monroe, VA 23651. Written comments on the scope of the EIS must be received by November 12, 2008. For any questions about the Scoping Meeting, please inquire at (757) 788-5363.

Richard Muller

From: legalAds [legalAds@dailypress.com]
Sent: Monday, October 20, 2008 11:40 AM
To: rm@marstel-day.com
Subject: RE: Legal Ad for Publication

Richard,
Thank you for contacting me. I scheduled a make good at no additional cost to you to run Tuesday. I will email a proof to you. Thank you.

-----Original Message-----
From: Richard Muller [mailto:rm@marstel-day.com]
Sent: Thursday, October 16, 2008 3:15 PM
To: 'Legal Ads'; legalAds
Subject: Legal Ad for Publication

Hi Amber and Cynthia,

I've attached an ad for placement in BOTH the Virginian-Pilot and the Daily Press. (Just wanted you to know that I'm not shopping prices here.)

It should appear one day only, and Saturday would be preferable to Sunday.

My name and telephone number appear in the signature block below and my mailing/billing address is:

342 North First St.
Hampton, VA 23664-1448

Thank you for attention to this.

Sincerely,

Richard Muller
Marstel-Day, LLC
www.marstel-day.com
757.439.8147

CLASSIFIED ADVERTISING **PROOF/QUOTE**

Printed by: cynpow
at: 11:37 am
on: Monday, Oct 20, 2008

Ad #: 6941826

7505 Warwick Blvd.
Classified Advertising MP1109
Newport News, VA. 23607-0746
757-247-4700
Classified 757-928-0354 (fax)
Real Estate 757-247-7473 (fax)

Advertiser Name: RICHARD MULLER
Account #
Ad Size 2 x 49.000

Amount Due: $ 0.00

Ad Copy (please note that ad is enlarged 25%):

FORT MONROE PUBLIC NOTICE OF SCOPING MEETING

Department of the Army Invites Public Input for the Environmental Impact Statement (EIS) of the Fort Monroe Base Realignment and Closure (BRAC) Action

When: 7:00 p.m.-9:00 p.m. on October 28, 2008
Where: Northampton Community Center, 1435 Todds Lane, Hampton, VA 23666; (757) 825-4805
(http://www.hampton.gov/Parks/north_hampton_cc.html)

In compliance with the National Environmental Policy Act, the Department of the Army, Fort Monroe will conduct a Scoping Meeting on October 28, 2008, at the location and time listed above to solicit input on the scope of the EIS for the BRAC action for Fort Monroe, Virginia. The purpose of the Scoping Meeting is to seek public input on issues that should be addressed in the EIS to augment comments previously received by the City of Hampton, the Local Redevelopment Authority (LRA), and at the January 30, 2007 Fort Monroe Environmental Assessment Scoping Meeting. Federal, state, and local agencies, federally recognized tribes, individuals, and organizations that have an interest are urged to participate. The meeting is open to the public and, after opening statements, will be held open-house style. Members of the public may attend at their convenience during the above time period.

The Department of the Army, Fort Monroe invites open comment on the activities proposed to implement the BRAC Commission's recommendation pertaining to the closure of Fort Monroe. The EIS will evaluate the potential environmental and socioeconomic effects associated with the proposed action. The EIS will consider a range of alternatives to accommodate the BRAC Commission's recommendation, including proposals submitted by the LRA that are available online at www.FMFADA.com

The Army encourages comments from all citizens and agencies. Written questions or comments concerning the development of the EIS will be accepted at the Scoping Meeting or may be submitted to Ms. Jennifer Guerrero, Directorate of Public Works, 318 Cornog Lane, Fort Monroe, VA 23651. Written comments on the scope of the EIS must be received by November 12, 2008. For any questions about the Scoping Meeting, please inquire at (757) 788-5363.

Appendix C: Letter of Invitation to Federal, State and Local Agencies and Officials, Tribes, and Other Potentially Interested Parties

---

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
3 RUCKMAN ROAD, BUILDING 77
FORT MONROE VA 23651

REPLY TO
ATTENTION OF:

October 15, 2008

Office of the Commander

Subject: Fort Monroe Notice of Scoping Meeting

See Addressee List

The Department of the Army invites input from federal and state agencies, interested parties and the general public on the Environmental Impact Statement (EIS) of the Fort Monroe Base Realignment and Closure (BRAC) Action

In compliance with the National Environmental Policy Act, the Department of the Army, Fort Monroe will conduct a Scoping Meeting on October 28, 2008 from 7:00 pm to 9:00 pm, at the Northampton Community Center, 1435 Todds Lane, Hampton, VA 23666. For more information on this location, please visit http://www.hampton.gov/Parks/north_hampton_cc.html

This Scoping Meeting will be conducted to solicit input on the scope of the EIS for the BRAC action for Fort Monroe, Virginia and determine concerns and issues that should be addressed in the EIS. The purpose of the meeting is to augment comments previously received by the City of Hampton, and the Local Redevelopment Authority (LRA) at the January 30, 2007, Fort Monroe Environmental Assessment Scoping Meeting. Federal, state, and local agencies, federally recognized tribes, individuals, and organizations that have an interest are urged to participate. The meeting is open to the public and, after opening statements, will be held open-house style. Members of the public may attend at their convenience during the above time period.

The Department of the Army, Fort Monroe invites open comment on the activities proposed to implement the BRAC Commission's recommendation pertaining to the closure of Fort Monroe. The EIS will evaluate the potential environmental and socioeconomic effects associated with the proposed action. The EIS will consider a range of alternatives to accommodate the BRAC Commission's recommendation, including proposals submitted by the LRA that are available online at www.FMFADA.com

The Army encourages comments from all citizens and agencies. Written questions or comments concerning the development of the EIS will be accepted at the Scoping Meeting or may be submitted to Ms. Jennifer Guerrero, Directorate of Public Works, 318 Cornog Lane, Fort Monroe, VA 23651 or by telephone at (757) 788-3809. Written comments on the scope of the EIS must be received by November 12, 2008. For any questions about the Scoping Meeting, please inquire at (757) 788-5363.

Sincerely,

for ANTHONY D. REYES
Colonel, U.S. Army
Commanding

encls

DISTRIBUTION LIST

Federal Officials & Agencies

Senators

Honorable John Warner
225 Russell Senate Office Building
Washington, DC 20510

Honorable Jim Webb
Senate Russell Building, C1
Washington, DC 20510

Representatives

Congresswoman Thelma Drake
2nd District of Virginia
1208 Longworth House Office Building
Washington, DC 20515

Congressman Bobby Scott
3rd District of Virginia
1201 Longworth House Office Building
Washington, DC 20515

Federal Agencies

Ms. Karen DelGrosso
USEPA, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

U.S Department of the Interior
Fish and Wildlife Services
1849 C Street, N.W.
Washington, D.C. 20240

Ms. Karen Mayne / Ms. Kim Marbain
US Fish and Wildlife Service
VA Field Office
Division of Ecological Services
6669 Short Lane
Gloucester, VA 23061

Advisory Council on Historical Preservation
1100 Pennsylvania Avenue NW
Suite 809
Washington, DC 20004

U.S Department of Agriculture
1400 Independence Ave., S.W.
Washington, DC 20250

Mr. Eugene Crabtree
USDA, NRCS
310 Shea Drive, Building 3
Chesapeake, VA 23320

Mr. David Cotingham, Director
NOAA
Ecology and Conservation District
14th and Constitution Avenue, NW
Washington, DC 20230

Vice Admiral Roger T. Rufe, Jr.
Commander
United States Coast Guard
Atlantic Area, Fifth District
431 Crawford Street
Portsmouth, VA 23704

USGS
Water Resources Division
John W. Powell Federal Building
12201 Sunrise Valley Drive
Reston, VA 20192

State Officials & Agencies

Governor

Honorable Tim Kaine
Patrick Henry Building, 3rd Floor
1111 East Broad Street
Richmond, Virginia 23219

State Senators – Districts 14, 2, 1, 5, 3, 6, 7, & 8

Senator Harry Blevins
P.O. Box 16207
Chesapeake, VA 23328

Senator Mamie Locke
P.O. Box 3006
Hampton, VA 23663

Senator John Miller
P.O. Box 6113
Newport News, VA 23606

Senator Yvonne Miller
P.O. Box 452
Norfolk, VA 23501

Senator Thomas K. Norment, Jr.
P.O. Box 6205
Williamsburg, VA 23188

Senator Ralph S. Northam
P.O. Box 9363
Norfolk, VA 23505

Senator Kenneth W. Stolle
2101 Parks Avenue, Suite 700
Virginia Beach, VA 23451

Senator Frank W. Wagner
P.O. Box 68008
Virginia Beach, VA 23471

Delegate Mamye E. BaCote
House of Delegates – 95th District
P. O. Box 5154
Newport News, VA 23605

Delegate Kenneth C. Alexander
House of Delegates - 89th District
7246 Granby Street
Norfolk, VA 23505

Delegate Joseph F. Bouchard
House of Delegates – 83rd District
P.O. Box 68726
Virginia Beach, VA 23471

Delegate Thomas D. Gear
House of Delegates – 91st District
P.O. Box 7496
Hampton, VA 23666

Delegate Phillip A. Hamilton
House of Delegates – 93rd District
P.O. Box 1585
Newport News, VA 23601

Delegate Algie T. Howell, Jr.
House of Delegates – 90th District
P.O. Box 12865
Norfolk, VA 23541

Delegate Salvatore R. Iaquinto
House of Delegates - 84th District
P.O. Box 6888
Virginia Beach, VA 23456

Delegate Johnny S. Joannou
House of Delegates - 79th District
709 Court Street
Portsmouth, VA 23704

Delegate Lynwood W. Lewis, Jr.
House of Delegates – 100th District
P.O. Box 760
Accomac, VA 23301

Delegate Paula J. Miller
House of Delegates – 87th District
P.O. Box 8757
Norfolk, VA 23503

Delegate G. Glenn Oder
House of Delegates – 94th District
P.O. Box 6161
Newport News, VA 23606

Delegate Brenda L. Pogge
House of Delegates – 96th District
P.O. Box 1386
Yorktown, VA 23692

Delegate Harry R. Purkey
House of Delegates – 82nd District
2352 Leeward Shore Drive
Virginia Beach, VA 23451

Delegate Robert Tata
House of Delegates – 85th District
4536 Gleneagle Drive
Virginia Beach, VA 23462

Delegate Jeion A. Ward
House of Delegates – 92nd District
P.O. Box 7310
Hampton, VA 23666

Delegate Robert W. Mathieson
House of Delegates – 21st District
P.O. Box 8021
Virginia Beach, VA 23450-8021

State Agencies

Ms. Ellie Irons
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

Mr. John Paul Woodley, Jr.
Commonwealth of Virginia
Secretary of Natural Resources
799 9th Street Office Building
Richmond, VA 23219

Administrator
Council on the Environment
202 North Ninth Street
Suite 900
Richmond, VA 23219

Virginia Department of Conservation
and Recreation
203 Governor Street, Suite 236
Richmond, VA 23219-2010

Ms. Sheri Kattan
Department of Water Quality
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach, VA 23462

Mr. Brian Moyer
4010 West Broad Street
P.O. Box 11104
Richmond, VA 23230-1104

Mr. Kotur S. Narasimhan
Air Data Analysis Program
629 East Main Street, 8th Floor
Richmond, VA 23219

Mr. Tom Modena
Waste Division
629 East Main Street, 4th Floor
Richmond, VA 23219

Ms. Ellen Gilinsky
Virginia Water Protection Program
629 East Main Street, 9th Floor
Richmond, VA 23219

Mr. Asif Malik
Virginia Department of Health
Water Programs
1500 East Main Street
Room 109
Richmond, VA 23219

Virginia Department of Health
Bureau of Toxic Substances
PO Box 2448
Room 124
Richmond, VA 23218

Ms. Kathleen Kilpatrick
State Historic Preservation Officer
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Mr. Thomas Barnard, Jr.
Virginia Institute of Marine Science
Gloucester Point, VA 23602

Mr. Frank Fulgham
Office of Plant & Pest Services
1100 Bank Street
Richmond, VA 23219

Ms. Susan Douglas
Division of Water Supply Engineering
1500 East Main Street, Room 109
Richmond, VA 23219

Mr. Eugene K. Rader
Division of Mineral Resources
PO Box 3667
Charlottesville, VA 22903

Mr. W. Douglas Beisch, Jr.
Chesapeake Bay Local Assistance
Department
101 North 14th Street, 17th Floor
Richmond, VA 23219

Mr. Robert W. Grabb, Assistant
Commissioner
Virginia Marine Resources Commission
2600 Washington Avenue
Newport News, VA 23607

Mr. Arthur Collins
Executive Director
HRPDC
723 Woodlake Drive
Chesapeake, VA 23320

City of Hampton
Office of the City Manager
22 Lincoln Street
8th Floor, City Hall
Hampton, VA 23669

City of Hampton
Dept. of Planning
1 Franklin Street
Suite 603, Ruppert Sargent Building
Hampton, VA 23669

City of Hampton
Department of Economic Development
1 Franklin Street
Suite 600, Ruppert Sargent Building
Hampton, VA 23669

Director
Newport News Wetlands Board
Department of Planning and Development
2400 Washington Avenue
Newport News, VA 23607

Mary Sherwood Holt
Chesapeake Bay Foundation
Lower Peninsula Chapter
7 River Road
Newport News, VA 23601

Interested Tribes and Tribes of Unknown Interest

Virginia Council on Indians
P.O. Box 1475
Richmond, VA 23218

Rappahannock Tribe
HCR 1, Box 7
Indian Neck, VA 23148

Mattaponi Indian Reservation
1467 Mattaponi Reservation Circle
West Point, VA 23181

The Chickahominy Tribe
8200 Lott Cary Road
Providence Forge, VA 23140
Upper Mattaponi Tribe
Chief Edmund S. Adams
7412 Adams Farm Road
Mechanicsville, VA 23111

Eastern Chickahominy Tribe
Marvin Bradby
12111 Indian Hill Lane
Providence Forge, VA 23140

Pamunkey Tribe
Chief William P. Miles
Route 1, Box 2220
King William, VA 23086

Local Government Officials & Agencies

Local Government

Mayor Molly Joseph Ward
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Vice Mayor Joseph H. Spencer, II
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Councilman Randy Gilliland
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Councilman Ross A Kearney, II
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Councilwoman Angela Lee Leary
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Councilman George E. Wallace
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Councilman Paige V. Washington, Jr.
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

James A. Young, Chairman
13 Wexford Hill Road
Hampton, VA 23666

Ralph A. Heath, III, Vice-Chairman
38 Northampton Drive
Hampton, VA 23666

Andre McCloud, Commissioner
2302 LaGuard Drive
Hampton, VA 23661

Timothy B. Smith, Commissioner
148 Meredith Avenue
Hampton, VA 23669

Amy Thorstad, Commissioner
1 Overlook Court
Hampton, VA 23666

George E. Wallace, Council
Member/Commissioner
3 Colonnade Court
Hampton, VA 23666

Jesse Wallace, City Manager/Commissioner
22 Lincoln Street
Hampton, VA 23669

Terry P. O'Neill, Director of
Planning/Secretary to Commission
Planning Department
1 Franklin Street, Suite 603
Hampton, VA 23669

Historic Preservation Advisory Group

Robert Nieweg, Director
Southern Field Office, National Trust for
Historic Preservation
1785 Massachusetts Avenue, NW
Washington, DC 20036-2117

Mary Means, President
Mary Means and Associates
108 South Fayette Street
Alexandria, VA 22314

Eleanor Krause, Principal
RKTects, Inc.
1010 King Street, Suite #3
Alexandria, VA 22314

Dr. Laurenett Lee, Curator
African American History, Virginia Historical Society
P.O. Box 7311
Richmond, VA 23221-0311

Jeanne Zeidler, Director
Jamestown 2007
Municipal Building, 401 Lafayette Street,
Williamsburg, VA 23185-3617

John Munick
Drucker and Falk Realtors
NO ADDRESS AVAILABLE

Alisa Bailey, President
Virginia Tourism Corporation
901 East Byrd Street
Richmond, VA 23219

Dorothy Redford, Executive Director
Somerset Plantation State Historic Site, NC
2572 Lake Shore Road
Creswell, NC 27928

William A. Armbruster
Executive Director, FADA
Old Quarters #1
151 Bernard Road
Fort Monroe, VA 23651

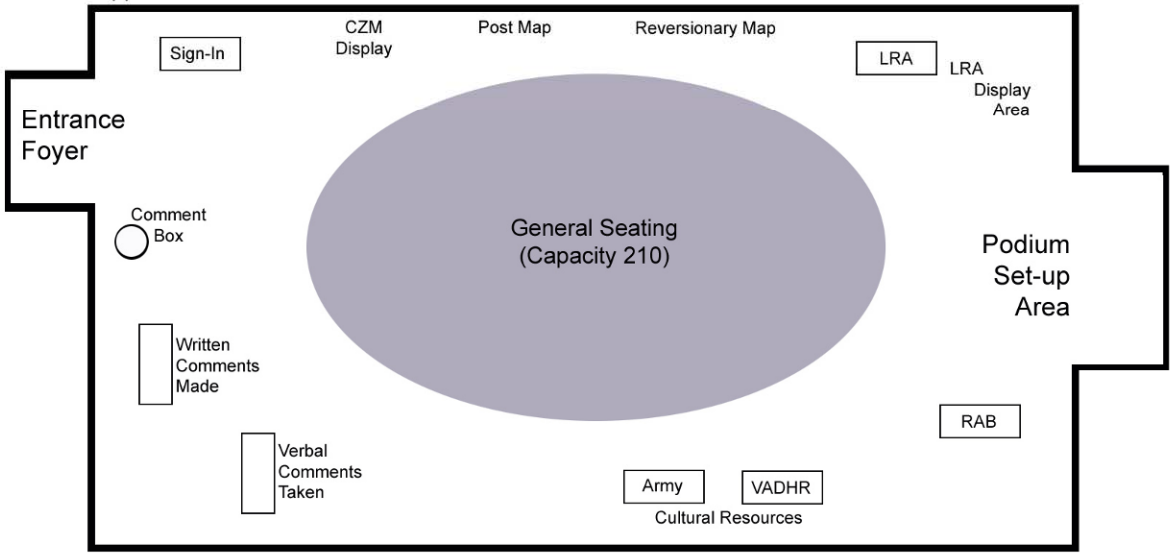
Appendix D: Scoping Meeting Room Layout

Proposed Room Layout
Fort Monroe EIS Scoping Meeting
28 October 2008, 7-9 pm
Virginia Room: available for
set-up at 4:30 pm

Northampton Community Center
(associated with Jefferson Davis Middle School)
1435-A Todds Lane
Hampton, Virginia 23666
(757) 825-4805

Approximate Room Size 85 ft x 48 ft

not to scale



AGENDA

Public Scoping Meeting

Fort Monroe Base Closure Environmental Impact Statement (EIS)
Tuesday, October 28, 2008
7:00 PM – 9:00 PM
Northampton Community Center, Hampton, Virginia
http://www.hampton.gov/Parks/north_hampton_cc.html

I

7:00 PM – Doors opened. Visitors greeted and requested to sign-in. Guests are invited to review the displays, which are designed to stimulate thoughts and encourage opinions.

II

7:15 PM – Welcome by COL Anthony D. Reyes, Garrison Commander, Fortt Monroe,

followed by

Mr. Richard Muller presenting a brief overview of the National Environmental Policy Act (NEPA) process and the significance of public involvement toward responsible environmental planning.

III

7:30 PM to Closing - Guests are invited to present their comments verbally, or by submitting their prepared written comments. Forms are also provided for comments. These may be completed and submitted at the meeting or mailed as directed when finished. Mailed and electronic submittals will continue to be received until November 12, 2008.

IV

After all verbal comments are received from the audience and until closing, guests may continue to view the displays and interact with resource area specialists.

28 October 2008

FACT SHEET

Fort Monroe Disposal and Reuse
National Environmental Policy Act (NEPA)
Environmental Impact Statement (EIS) and Public Participation Process

PURPOSE OF PUBLIC SCOPING MEETING

- To request public input on issues of concern regarding environmental impacts of the disposal and reuse of Fort Monroe.
- To inform the public of the Army NEPA EIS process.

THE EIS PROCESS

- Federal agencies are required to prepare an environmental analysis in accordance with NEPA for any actions that have the potential to affect the environment. (We need to tell the story how we transitioned, perhaps as a separate bullet, from an EA to an EIS)
- The Army's proposed action is to dispose of surplus property generated by the closure of Fort Monroe. The Army has determined that Base Realignment and Closure (BRAC) actions at Fort Monroe have the potential to cause significant environmental impacts; therefore an EIS is required.
- The EIS will consider all environmental and socioeconomic impacts of disposal and reuse of Fort Monroe, focusing on concerns raised by the public and federal, state, and local government resource agencies.
- The EIS will analyze the direct, indirect, and cumulative impacts of the Army's disposal of the property as the primary action. A range of reuse scenarios will be evaluated as secondary actions of disposal. These scenarios will encompass the community's reuse plan and include higher and lower levels of development.
- Public involvement is an integral part of the NEPA EIS process.
- This process will inform the public and federal, state, and local government officials, as well as decision makers, of environmental and socioeconomic issues associated with property transfer and reuse and seek their comments.
- All comments, issues, and concerns raised during the public participation process will be properly addressed in the NEPA EIS document.

FOCUS OF THE EIS

For additional information contact Fort Monroe Directorate of Public Works at monr.dpw@monroe.army.mil,Telephone number 757-788-5363/5947

Primary environmental issues that will be evaluated in detail in the EIS include:

- Air Quality
- Traffic
- Transportation
- Land Use
- Noise
- Cultural Resources
- Water Resources
- Natural Resources
- Aesthetics
- Socioeconomics
- Community Facilities & Services

Note: The EIS will consider any other issues of concern raised by the public, agencies, or other interested or affected parties. The deadline for submitting any additional environmental concerns to the Army is November 12, 2008 (We need to mention that comments submitted in the EA Scoping Process will certainly be considered in the preparation of this EIS)

FORT MONROE EIS SCHEDULE

- Notice of Intent published in the Federal Register on September 19, 2008
- Public Scoping Meeting, October 28, 2008
- Public comments due on scope of EIS, November 12, 2008
- Preparation of Draft EIS
- Publication of Notice of Availability of Draft EIS
- Public Meeting and 45-day Public Review Period for Draft EIS
- Preparation of Final EIS
- Publication of Notice of Availability of Final EIS
- Signature of the Record of Decision 31 days after the Final EIS is released.

PUBLIC REVIEW/COMMENT PROCESS

The public and any interested or affected parties are invited to comment on the environmental issues concerning the Fort Monroe EIS. Comment forms will be provided at the October 28 public meeting. **Public comments on the scope and focus of the EIS will be accepted until November 12, 2008.**

There are four (4) ways to comment:

1) Drop your completed comments form in the comments box at the workshop;
2) Provide verbal comments to a court recorder on computer at the workshop;
3) Mail the comments form to the Fort Monroe address on the form; and
4) Email your comments to monr.dpw@montor.army.mil

For additional information contact Fort Monroe Directorate of Public Works at monr.dpw@monroe.army.mil,Telephone number 757-788-5363/5947

Following release of the Draft EIS there will be an additional 45-day public comment period and public meeting to be announced in the local newspaper.

For additional information contact Fort Monroe Directorate of Public Works at monr.dpw@monroe.army.mil,Telephone number 757-788-5363/5947

Sign In Sheet

Fort Monroe Base Realignment and Closure Environmental Impact Statement Scoping Meeting
Northampton Community Center, October 28th, 2008

Name	Organization	Address	Phone	Email
Jim Barnes	Citizen	3 Poplamkin Circle Hpt.	838-7572	Jbtkd@cox.net
Carl Tewksbury	KHA	222 Central Park Ave, VB, VA	213-8600	carl.tewksbury@kimley-horn.com
Ben Reim	"	"	"	ben.reim@kimley-horn.com
Bob Ross	BRAC Office	Crystal City, VA	703-602-2878	robert.ross@hqda.army.mil
Paul Presenza	Army/DPW	Fort Monroe	788-5365	Paul.Presenza@us.army.mil
Cliff Whitehouse	Army/PAI	Fort Monroe	788-4057	clifford.whitehouse@us.army.mil
Robin Mills	Army/DPW	Fort Monroe	788-3805	robin.d.mills@us.army.mil
Wayne Kanoy	Army/PAO	Fort Monroe	788-3207	wayne.kanoy@us.army.mil
Julie Carver	Matrix/FMFADA	Fort Monroe		julie.carver@matrixdesigngroup.com
Keith Cannady	City of Hampton			
Tom Fahrney	VDOT		703 383-2489	Tom.Fahrney@VDOT.Virginia.Gov
Tom Howard	Rainfor Rent	121 Westbrook Drive, Hampton, VA	757-896-2825	thoward@rainforrent.com
Eric Stringfield	VDOT	1700 N. Main St. Suffolk VA.	757-925-3564	Eric.Stringfield@VDOT.Virginia.Gov
Josh Gillespie	FMFADA	151 Bernard Rd Ft Monroe VA	637-7778	jgillespie@fmfada.com
Sam Martin	Buckroe Civic Assc.	24 Mansford Drive	(757) 848-1163	SRMartinStudio@Earthlink.Net
Clyde Williams	Citizen	305 Lakeland Dr	727-0056	bubbasuel@cox.net
George Venline	"	3 Colonnade Hpt	757-826-9078	
Tom & Angela Leung	"	415 W. Gilbert 23669	722-0604	wtlvmj60@aol.com

Fort Monroe Base Realignment and Closure
Environmental Impact Statement

Public Scoping Comment Sheet

Name:_____Date:_____
Organization You are Representing:_____ Self ❑
Mailing Address: _____City _____State _____ZIP_____
E-mail:_____Telephone:_____

Comments:_____

Please note:
The Public Comment Period Ends November 12, 2008
Submit you comment sheet at this meeting
OR
Fold/staple/stamp and return by mail or email comments to monr.dpw@monroe.army.mil

Thank you.

Fold, Staple and Stamp

- - - -

Appendix F: Fort Monroe Scoping Comments Received:

COMMONWEALTH of VIRGINIA

Office of the Governor

Pierce R. Homer
Secretary of Transportation

P.O. Box 1475
Richmond, Virginia 23218

(804) 786-8032
Fax: (804) 786-6683
TTY: (800) 828-1120

November 4, 2008

Department of the Army
Environmental Division, Directorate of Public Works
318 Cornog Lane
Fort Monroe, Virginia 23651-1110

Dear Sir/Madam:

Thank you for allowing the Virginia Department of Transportation (VDOT) the opportunity to comment on the scope of the Fort Monroe Base Realignment and Closure Environmental Impact Statement (EIS). As we have expressed to the Chairman of Fort Monroe Federal Area Development Authority (FMFADA), we remain concerned over potential transportation impacts associated with the future re-use of Fort Monroe (see attached letter). The following provides our formal comments on the scope of the EIS:

1. We are disappointed the EIS project team did not invite VDOT to participate in the scoping of the EIS traffic study. We believe a comprehensive traffic study, which includes detailed analyses of the potential traffic impacts on I-64 and its interchanges serving Fort Monroe, is critical in determining the transportation impacts and mitigation measures needed to accommodate future growth as envisioned by FMFADA.

2. The introduction of a northern road connection from Fort Monroe into the City of Hampton will change travel patterns and trip distributions within the region and therefore should be evaluated as part of a travel forecasting modeling effort;

3. The EIS should evaluate the transportation impacts of several different re-use alternatives for Fort Monroe. The Re-use Plan adopted by the FMFADA indicates the development of the Wherry Quarter area as "To Be Determined". We believe the EIS transportation evaluation should include development assumptions for the Wherry Quarter in order to gauge a "worst case" scenario in terms of vehicle trips generated by and attracted to Fort Monroe. This will allow the transportation infrastructure to be sized to accommodate future development of this area.

4. Consideration of the effectiveness and feasibility of providing alternative transportation modes, such as increased transit and pedestrian/bicycle facilities, to serve the projected increase in travel demand should be evaluated in the EIS.

5. Development and implementation of a Transportation Demand Management Plan to reduce the projected increase in travel demand should be considered as a mitigation strategy to reduce vehicular trips.

6. The identification and adequacy of emergency evacuation routes for all traffic associated with future re-development of Fort Monroe should be reviewed as part of the EIS.

VDOT staff remains available to discuss the transportation analyses that we believe should be used in the EIS to evaluate the impacts and mitigation strategies associated with the redevelopment of Fort Monroe. Please contact Mr. Dennis Heuer, VDOT's Hampton Roads District Administrator, and Mr. Tom Fahrney, VDOT's Commonwealth Base Realignment and Closure Coordinator, should you have any questions. Mr. Heuer can be reached at (757) 925-2511 and Mr. Fahrney at (703) 383-2489.

Thank you for your consideration. VDOT staff and I look forward to working with you and FMADA during the EIS process.

Sincerely,

Pierce R. Homer

Pierce R. Homer

PRH:tf

Copy: The Honorable Keith Eastin
The Honorable Patrick O. Gottschalk
The Honorable L. Preston Bryant, Jr.
David S. Ekern
Matthew O. Tucker
Dennis Heuer
Tom Fahrney
William Armbruster, FMADA

The following comments were receivedby Email

Presented chronologically in order received from earliest to late.

From: Tim Olson [mailto:timolson@cox.net]
Sent: Monday, November 10, 2008 10:37 PM
To: rm@marstel-day.com
Subject: Environmental Impact Statement (EIS) for Disposal and Reuse of Fort Monroe.

Sir/Ma'am,

I'm a strong supporter of Citizens for a Fort Monroe National Park (CFMNP). I endorse their recommendations and ask that the upcoming EIS process involve at least two things:

1) Thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
2) A plan for substantial public participation in the EIS process.

Please do all you can to preserve this national treasure for all to enjoy!

Respectively,

Tim Olson
Poquoson, VA

From: Stanley Brand [mailto:sbrand@wildblue.net]
Sent: Monday, November 10, 2008 11:20 PM
To: rm@marstel-day.com
Subject: Fort Monroe National Park

I am a retired CWO3 formally stationed at Fort Eustis. I always enjoyed taking visiting friends and family to Fort Monroe to show off one of our National Treasures. I would like to see the fort turned into a National park and the housing proposed for the public should be turned over to the Air Force or the Navy for military housing. The Army spent Millions renovating the housing why just give it away???

From: Robert Lumsden [mailto:rdlumsden@msn.com]
Sent: Monday, November 10, 2008 11:36 PM
To: rm@marstel-day.com
Subject: Fort Monroe

To whom it may concern:
Please consider for the EIS process to involve at least these two things:
* Thorough investigation of a wide range of alternatives including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
* A plan for substantial public participation in the EIS process.
Robert D. Lumsden
755 Oyster Way
Heathsville, VA 22473
804-580-5107
301-262-4574(cell)

From: Wayne & Sally WIlson [mailto:vadare@gmail.com]
Sent: Monday, November 10, 2008 11:50 PM
To: rm@marstel-day.com
Subject: Ft. Monroe Disposal & Reuse

As a Virginian and a visitor to the Ft. Monroe facility I want to pass along my hopes for the scope and process of the Environment Impact Study soon to be performed.

I am particularly interested that the scope of the study will include an alternative for a Ft. Monroe National Park. The substantial history of the facility merits serious consideration as a new national park.

Please also include the public in the process of the Environmental Impact Study. The considerable public interest in the ultimate use of Ft. Monroe must be included for the betterment of the study.

Very Respectfully,
Wayne L Wilson
Oak Hill, VA

From: K Deskins [mailto:deskins@cox.net]
Sent: Tuesday, November 11, 2008 1:00 AM
To: rm@marstel-day.com
Subject: Environmental Impact Statement (EIS)

Request the EIS conduct a thorough investigation into a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
A plan for substantial public participation in the EIS process.
Thanks for your kind consideration.

Kenny Deskins
SGM. U S Army Retired
Deskins@cox.net

From: John McGaw [mailto:johnemcgaw@gmail.com]
Sent: Tuesday, November 11, 2008 5:11 AM
To: rm@marstel-day.com
Subject: Fort Monroe

The Fort Monroe Environmental Impact Statement process should involve, at a minimum:
1) Thorough investigation of a wide range of alternatives,including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
2) A plan for substantial public participation in the EIS process.
--
John E. McGaw
315 9th Street SE
Washington, DC 20003-2116
mobile (202) 351-9680

-----Original Message-----
From: deanne.beckwith [mailto:deanne.beckwith@cox.net]
Sent: Tuesday, November 11, 2008 5:48 AM
To: rm@marstel-day.com
Subject: EIS

I support and request that the Army consider a wide range of impacts and
"alternatives' during the EIS process vs simply following the range of alternatives in the Fort Monroe Authority's "Reuse Plan". The EIS prociess should involve at leat these two things:

Thorough investigation of a wide range of alternatives, including possibilities for substiantial National Park Service involvement in a self-sustaining Fort Monroe National Park

A plan for substiantial Public participation in the EIS process

It deserves a legacy that is preserved and protected as a significant historic, geographic, and natural beauty, representative of unique qualities in our American culture.

Deanne Beckwith

-----Original Message-----
From: Marc Bendick [mailto:bendickegan@mindspring.com]
Sent: Tuesday, November 11, 2008 7:42 AM
To: rm@marstel-day.com
Subject: Ft Monroe Comment

RE: Environmental Review Process for Disposal of Fort Monroe:

As a resident of the Mid-Atlantic States, frequent visitor to Virginia's
tourist attractions, and believe in the power of American history to inspire
our nation, I strongly favor creation of a Fort Monroe National Historical
Park.

Based on my understanding of the role of the Environmental Impact Process in
making such decisions, I strongly urge that the EIS process include substantial public participation.

I also urge that the process thoroughly investigate options for substantial
National Park Service involvement in a self-sustaining Fort Monroe National
Park.

Thank you.

Marc Bendick, Jr.

4411 Westover Place N.W.
Washington, DC 20016
telephone (202) 686-0245
fax (202) 363-4429

bendickegan@mindspring.com
www.bendickegan.com

-----Original Message-----
From: Peter Broadbent [mailto:pbroadbent@cblaw.com]
Sent: Tuesday, November 11, 2008 7:54 AM
To: rm@marstel-day.com
Subject: Fort M onroe EIS process

Dear Sirs,

In developing an EIS process for Fort Monroe, I urge you to consider 1) use of most of the Fort Monroe property as a historic public park, under the auspices of the National Park Service, with participation and museum branches or exhibits inside Fortress Monroe from a range of relevant Virginia private historical preservation groups, including the Museum of the Confederacy and the James Monroe Memorial Foundation, and 2) ensuring ample opportunity for public participation in the EIS process, and giving particular weight to that public input.

Historic exhibits and recreational opportunities could co-exist in such a park (as Valley Forge has done with hiking trails and recreational oportunities which make that park an attractive destination beyond its historical significance). A range of private sector historic museums or exhibits are necessary to highlight the historical significance of the Fort Monroe area (beginning with the Spanish settlements at Hampton pre- dating Jamestown, early English colonial settlements, the naval blockade of nearby Yorktown during the Revolutionary War , the burning of Hampton during the War of 1812 , the creation of Fort Monroe under the homeland defense program inititiated under President James Monroe, and the role of Fort Monroe during the Civil War, including its role as a center for freeing African- American slaves, and generally as a naval history center for Hampton Roads)

Sincerely,

Peter E. Broadbent, Jr.

From: Bev Thoms [mailto:thoms.bev@gmail.com]
Sent: Tuesday, November 11, 2008 8:02 AM
To: rm@marstel-day.com
Subject: Fort Monroe Disposal & Reuse

Please include in your EIS for Fort Monroe, the following:

1. Thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.

2. A plan for substantial public participation in the EIS process.

Thank you
Bev Thoms
21700 Big Woods Road
Dickerson, MD 20842

From: George Neil [mailto:neil@jlab.org]
Sent: Tuesday, November 11, 2008 8:06 AM
To: rm@marstel-day.com
Subject: Fort Monroe Reuse Plan

Dear Sir
I am strongly in favor of making Fort Monroe a National Park and believe it is very important that any study on its future include possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park. Any review should also include substantial public participation in the EIS process.
I would be happy to discuss this further with you.
George R. Neil
--
Dr. George R. Neil,
Cell 757-876-1775

From: Charlie Pate [mailto:cpate4@cox.net]
Sent: Tuesday, November 11, 2008 8:17 AM
To: rm@marstel-day.com
Subject: Possible Ft. Monroe National Park

I'm a retired Army officer doing historical research at the National Archives and other places. I'm constantly reminded of the role Ft. Monroe has played in our national history. This site is clearly deserving of national park status. Please include this in the alternatives for the Fort. I also believe there should be significant public representation and participation in the EIS process.

Charles Pate
LTC USA retired

From: mcelhinney@aol.com [mailto:mcelhinney@aol.com]
Sent: Tuesday, November 11, 2008 8:27 AM
To: rm@marstel-day.com; mrkadler@optonline.net; richard.j.cox1@us.army.mil; gfwilliams607@verizon.net; jfsteinle@msn.com; wawright05@comcast.net; irishjazz@comcast.net; lynnbull@wcps.org; ilyse_goldman@nps.gov; KHulser@nyhistory.org
Subject: Reasons Why Saving Fortress Monroe is a Good Idea

To Whom it may concern--

In the summer of 1992 I visited and made paintings of Fort Monroe over a sustained period. During that time I explored the vicinity; walked the parapet, dined with inhabitants and marveled at the structure's history, setting and architectural beauty.
Far from being the forbidding stronghold the name suggests, the Vaubanesque masonry of Fortress Monroe lies imbedded in one of America's small towns of leafy avenues; brick houses and friendly people. Amid the abandoned barbettes topping the fort's terreplein lie the final posts of Army pets; a touching tribute.
One day as I was painting along the water battery site; post engineer Lt. Col. Jack Miniclier invited me to have dinner with his family. What a pleasure! A tidewater feast with his lovely wife and children; crabcakes and beer in the cool of the evening in an 1819 house on the fort's parade ground. I will never forget the hospitable welcome, received by a stranger.

There are many reasons to save and preserve Fort Monroe. Old Point Comfort is where Anglo-America took root; 1607 landfall for Captains Christopher Newport and John Smith; the building project proclaiming that in military technology, the United States had arrived.
Fort Monroe is part of American biography; Robert E. Lee served here with the engineers while constructing Fort Wool at Rip-raps Island offshore, in the middle of Hampton Roads.
Edgar Allen Poe served here as an artillery sergeant, returning as a civilian in the year of his death to read a new poem "Ulalume" to friends at the Hygeia Hotel. The post served Presidents Andrew Jackson and John Tyler a "Camp David"-style retreat. During the Civil War Fort Monroe was visited by nearly every dignitary in the Union cause from Lincoln to the tens of thousands of US soldiers--black and white--who came through it on their way into action. It was at Fort Monroe that former Confederate president Jefferson Davis--himself a former Army man and graduate of West Point--was imprisoned after his capture.

Fortress Monroe is many things including a relic of a bygone era. The story written on its ramparts is our story--written in stone! Our reverence for memory is a testament to our own capacity for imagination.
If this old fort had been made of flesh and blood instead of stones and mortar, there would be no question of this: Fort Monroe is a great American--a monument to be treasured.

Emphatically,

James Lancel McElhinney, ***Assistant Professor of Art, Pratt Institute Brooklyn NY***

7 practical reasons to save and preserve Fort Monroe.

1. Historical significance and intangible value.

2. Heritage Tourism destination: Fortress Monroe and the Casemate Museum; teaching American history.

3. Recreational tourism destination: Resort-like setting with built-in infrastructure; houses (B&B and timeshare opportunities); services; hotel; churches; restaurants; waterfront.

4. Easy interface with tourism and recreation economies in Chesapeake; Hampton Roads area and Buckroe Beach

5. Easy interface with heritage tourism itineraries & economies linking Williamsburg, Jamestown and Yorktown Battlefield & Surrender site

6. Port of call on the Inland Waterway (recreational)

7. Invigorate economically challenged and predominantly African-American community of Phoebus, Virginia

-----Original Message-----
From: museumofamerica@myactv.net [mailto:museumofamerica@myactv.net]
Sent: Tuesday, November 11, 2008 9:13 AM
To: rm@marstel-day.com
Subject: Fort Monroe EIS

To whom it may concern,

Regarding your ongoing preparations of an Environmental Impact Report surrounding the issues and considerations of the future of Fort Monroe I
respectfully request that you include the following:

- Considering the historic significance of Fort Monroe, both the physical
plant as well as the surrounding grounds, not only as they bear on the history of the United States Army but also the significant role played by
the fort during the American Civil War, I request that any range of alternatives for future reuse or administration of the fort and grounds include participation or oversight by the National Park Service.

- I also request that there is a plan to include substantial tax-payer participation in the entire EIS process.

I thank you for your consideration of this request and wish you a happy Veterans Day.

Mannie Gentile
Boonsboro, MD

-----Original Message-----
From: burnette_l@juno.com [mailto:burnette_l@juno.com]
Sent: Tuesday, November 11, 2008 8:54 AM
To: rm@marstel-day.com
Subject: Regarding the future of FT MONROE, VA

To Whom It May Concern. I am writing to urge the Army to give all consideration to FT Monroe gaining National Park status upon its closure.
I have visited the Presidio and know that such a move would be in the best interest of FT Monroe and the people of VA and of the USA. If this is just not possible then I urge a thorough investigation of all options available that would make Monroe as close to National Park status as feasible. I think it is also essential that public participation be ensured in any Environmental Impact Statement (EIS) involving FT Monroe.
I personally admit to great chagrin that FT Monroe was not immediately accorded National Park status when the decision was made to close the post. The Fortress is a significant part of American history and should preserved at all costs. We Americans do not seem to appreciate/understand the need to preserve our past as does the rest of the world. I am hoping that surely this venerable part of our history will not fall through the cracks and be lost to the future. I urge you to be sure that the post and all bldgs significant to its history be preserved and that it (all three+miles) be turned into a lovely national park where families may come to visit and events such as weddings and other civic gatherings may be held.
The Fortress is most worthy of our consideration; our respect.

Margaret D Burnette, Citizen

Click for online loan, fast & no lender fee, approval today
http://thirdpartyoffers.juno.com/TGL2141/fc/Ioyw6i3m3WLY6DyuKfsWQ8phbzmjOPzsCjZFK0eK5mERXuJF42Nvb3/

From: LexaLynn Hooper [mailto:LHooper@AUSA.ORG]
Sent: Tuesday, November 11, 2008 9:39 AM
To: rm@marstel-day.com; Corneliussen@Verizon.net; Contact@CFMNP.org
Cc: burnette_l@juno.com
Subject: Ft Monroe: Please comment to Army

Dear Citizens for a Fort Monroe National Park:

We understand that you are asking for support to determine the final decision as to the future of Fort Monroe. I'm not sure what the plan will be, but I do know that retaining the status of Fort Monroe as a historical place is critical. As with all the forts that shaped our history, Fort Monroe played a historical part in forming that story that makes the US such a great country. To destroy that part of this history would be totally unfair not only to those who visit the fort but those who created that part of the history. My husband served in the Army and was stationed at Fort Monroe. We have two pets that are buried on top of the moat. We lived on post, and even though our quarters have been destroyed, we still have wonderful memories of the time that we spent there. We are such a small voice as to what happens to this beautiful post, but we urge you to act responsibly, respectfully and historically to preserve this part of American history. These two points must be followed though and totally investigated:

* Conduct a thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.

* Assure a plan for substantial public participation in the EIS process.
Brigadier General (R) and Mrs. Lynn Hooper

From: Johnny Finch [mailto:johnny_finch@yahoo.com]
Sent: Tuesday, November 11, 2008 9:59 AM
To: rm@marstel-day.com
Subject: EIS Process - Fort Monroe

Gentlemen:

The Virginia Association for Parks respectfully asks that the EIS process involve at least:

- a thorough investigation of a wide range of alternatives including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park, and
- a plan for substantial public participation in the EIS process

Thank you for the opportunity to comment.

Johnny Finch, President
Virginia Association for Parks
3601 Burton Road
Bumpass, VA 23024 Tel: 540-895-5061

From: Sepi Prichard [mailto:01.sepi@gmail.com]
Sent: Tuesday, November 11, 2008 10:01 AM

To: rm@marstel-day.com
Subject: Ft. Monroe

Please keep it just the way it is, my Dad was born there ! It holds many dear and precious periods in time for me and my family. I will not make as many trips to the Peninsula if your intent to change Ft. Monroe takes place ! My family name goes way back in the history of this country, Dinwiddie ! You will be changing history, which I feel you do not have the right to do. Sure, it's old...but one day you will be too, and consider how you would feel if someone wanted to make you into something that you never wanted to be and you could not stop them !
Back off, let the people of America keep Ft. Monroe...just the way it is, with proper care and well maintained of course !

Sepi Dinwiddie Prichard

From: PaulineOC@aol.com [mailto:PaulineOC@aol.com]
Sent: Tuesday, November 11, 2008 10:29 AM
To: rm@marstel-day.com
Cc: Corneliussen@Verizon.et
Subject: Ft. Monroe

Environmental Impact Statement (EIS) for disposal and reuse of Ft. Monroe:

Last month I took a visitor from CA to Ft. Monroe to show him the wonderful Army post where I lived for 3 years and where my daughter got married. We lived in the house where the oldest live oak tree in Virginia stands guard as it has for hundreds of years. My visitor is the son of an Army General, had never been to Ft. Monroe, and wanted to see it before it disappears as we now know it. He was heartbroken at the thought of such a wonderful historic site about to close and those who take it over looking to develop it for ... the money.

That day there were other visitors to the Casemate Museum, Chapel of the Centurion and the wonderful walk ways amongst historic homes. I spoke to some of them -- they had not been there before and were awestruck with the beauty and peaceful history surrounding them everywhere.

Please consider the people in this wonderful country and their heritage for generations to come. Allow them to speak and the public to participate in the EIS process. Once Fort Monroe is dismantled it is gone forever.

Please consider Fort Monroe National Park. I believe our citizens are hungry for real historic venues rather than those like Williamsburg, which is a reproduction. I believe Fort Monroe can be self-sustaining and a precious treasure for all to enjoy.

Fort Monroe National Park.

Pauline O'Connell
3 Forth River
Williamsburg, VA 23188

From: Young, Kenneth K (N-Raytheon) [mailto:kenneth.k.young@lmco.com]
Sent: Tuesday, November 11, 2008 10:34 AM
To: rm@marstel-day.com
Subject: Fort Monroe
Sir,

During the deliberations for ft Monroe, please ensure you thoroughly investigate alternatives including creating a National Park or at least involving the NPS in self-sustaining a Fort Monroe National Park.

I am also strongly concerned you plan for substantial public participation in the EIS process.

Thanks,

Ken Young
208 Brentmeade Drive
Yorktown, VA 23693
(757) 868-0112
Cell: (757) 777-7307
youngk1@AOL.com

From: Bob & Georgia [mailto:bandgspruill@cox.net]
Sent: Tuesday, November 11, 2008 10:45 AM
To: rm@marstel-day.com
Subject: Fort Monroe

Dear Sirs,
As you prepare the Environment Impact Statement for the Disposal and Reuse of Fort Monroe, please consider what the effects might be regarding its final consideration to be used as a National Park.
Best regards,
Bob Spruill
Virginia Beach, Va.

From: sewpsych@aol.com [mailto:sewpsych@aol.com]
Sent: Tuesday, November 11, 2008 10:53 AM
To: rm@marstel-day.com
Subject: Ft. Monroe

To whom it may concern
I wish to enter my voice to urge thorough investigation of ALL alternative plans including substantial Nat' l Park Service involvement for a self-sustaining Ft. Monroe National Park. The logical model for this would be the Praesidio property in San Francisco. Additionally, I urge that there be a plan for a significant level of public participation in the EIS process.
Thank you for your consideration of these important matters.
Sewell F. McLeod

From: butlers.va@juno.com [mailto:butlers.va@juno.com]
Sent: Tuesday, November 11, 2008 10:52 AM
To: rm@marstel-day.com
Subject: EIS process for Fort Monroe

Dear Sir,

The EIS process description for Fort Monroe contains this statement: "The Reuse Plan, prepared by the FMFADA and approved by Governor Kaine, will serve as the basis for determining reuse alternatives that will also be analyzed in the EIS."

How can a plan which cast aside the consideration of other alternatives become the sole basis for the Army's determination of re-use alternatives for Fort Monroe?

Please consider a much wider range of alternatives for this historic national treasure, including National Park involvement and a hybrid NPS/self-sustaining federal trust along the lines of the Presidio.

And please create a plan for public participation in the EIS process.

Fort Monroe has belonged to all Americans, and it should continue to do so.

Thank you,

Scott Butler
24 Amy Brooks Dr.
Newport News, VA 23606
Telephone: 757 596 2128

-----Original Message-----
From: Jim O'Connell [mailto:jim@oc-associates.com]
Sent: Tuesday, November 11, 2008 10:50 AM
To: rm@marstel-day.com
Subject: Fort Monroe

TO WHOM IT MAY CONCERN

I write in reference to the EIS process soon to be undertaken by the Army with respect to the disposition of Fort Monroe. I am a retired Army Colonel who served at Fort Monroe and recently visited the post where I was able to enjoy the ambience that I remembered, the Casemate Museum, the Chapel of the Centurion and all of the other delightful aspects of this unique place in America's history. There are two specific things I would ask for:

First, That the EIS process include a thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park; and, second, a implementation plan that includes the opportunity for substantial public participation in the EIS process.

As a Division Chief in the Office of the Chief of Staff Army from 1982-1985, I had oversight of the Base Closure process and activities during those years. There were substantial actions taken with respect to relocating commands from leased space in the National Capital Region to newly constructed facilities at Fort Belvoir in addition to the consolidation of functional requirements at Army installations throughout CONUS. Throughout this period of time, maintaining an awareness and promoting public understanding of the role that various Army posts played in the history of our nation played a preeminent role.

Fort Monroe is of particular historical significance due not primarily to its longevity but due to the significant role it played in the design and development of coastal defenses to defend harbors in the USA up to and including World War II. Additionally, it is the venue where significant aspects of the history of the Civil War in this country - to include the underground railroad - happened. This monument to our national identity -- much of which is on the National Historical Register -- needs to be preserved and not turned over to developers and entrepreneurs who, together with state and local tax

authorities, will seek to maximize their profits/taxes at the expense of generations to come being able to walk the ground and visualize how this nation protected itself in years gone by.

James T. O'Connell, Jr.
Colonel, US Army Retired.

From: George Evans [mailto:georgeandjoyce@cox.net]
Sent: Tuesday, November 11, 2008 11:04 AM
To: rm@marstel-day.com
Subject: Ft Monroe

TWIMC:

I recommend that the EIS include, as a possible end-state, a complete investigation of the possibility of Ft Monroe becoming a sustainable national park. I worked on Ft Monroe for six years. I do not want it to become high-rise waterfront condos. Hampton has visions of dollar signs floating in their heads over the transfer of Ft Monroe. Ft Monroe cannot be transformed into a gated community for the few. It must be maintained for all, in its historic setting.

I know the EIS process will include opportunities for the public to comment on the direction the EIS is taking. Pls listen to the public, not the dollars.

Thanx, GE
George Evans

From: Sharon Holbrook [mailto:spholbrook@cox.net]
Sent: Tuesday, November 11, 2008 11:05 AM
To: rm@marstel-day.com
Subject: Fort Monroe

Fort Monroe is beautiful - field trips there with students are a delight with the museum and history in the fort itself and the beautiful, tranquil grounds.

Please strongly consider a National Park there where the citizens of this land can enjoy the open spaces.

The location and the history make it the perfect place for a National Park. Please keep the public involved.

Sharon Ponder Holbrook
of Virginia Beach

```
-----Original Message-----
From: donna.r.powell@juno.com [mailto:donna.r.powell@juno.com]
Sent: Tuesday, November 11, 2008 11:27 AM
To: rm@marstel-day.com
Subject:

Re:  Fort Monroe

EIS process to involve at least these two things:
* Thorough investigation of a wide range of alternatives,
   including possibilities for substantial National Park Service
   involvement in a self-sustaining Fort Monroe National Park.
* A plan for substantial public participation in the EIS process.
```

As a resident of Hampton Roads who has spent time at Fort Monroe and is familiar with its history, I strongly urge that it be converted to a National Historical Park to preserve its value for future generations.

Donna Powell

From: Jack Thompson [mailto:thompsj7@cox.net]
Sent: Tuesday, November 11, 2008 11:37 AM
To: rm@marstel-day.com
Subject: Ft.Monroe

I ask that your consider the following in the EIS effort to plan for the future of Ft. Monroe:

Look at the total impact of the use of the land. Look at the impact on the environment of the area but also the culture and history of the area. It is imperative that the historical part of Ft. Monroe be saved for future generations and that the beach areas be open to the public. The best possible way to achieve these objectives is to retain those areas in a national park, making it impossible at a later date to have the space used for the benefit of a few wealthy investors at the cost of the majority of people in the area. This would be one more lasting historical site which could bring tourists from all over the world. Buildings and businesses come and go but land preserved by the national parks will be there for generations to come, a lasting contribution to the history of this area.

Mary Louise Thompson
113 Wind Forest Lane
Yorktown, VA 23692

From: hyork01@comcast.net [mailto:hyork01@comcast.net]
Sent: Tuesday, November 11, 2008 11:42 AM
To: rm@marstel-day.com
Subject: Ft Monroe closure

As a concerned citizen, I wish to express my preference that the unique property presently known as Ft. Monroe be given consideration as a national park. The fortress, an inclosed by moat fort, is within driving distance of a large percentage of the US population and is unique in its history and preservation of an important part of our history. From the early settlement of our country, a significant site for the history of the War Between the States, W.W. I, and W.W. II, history comes alive through the museum, the casements, the gun battery locations, etc. The unspoiled beach would provide a wonderful recreation location for millions of our citizens, most of whom would be willing to suport the cost of operation through a reasonable fee.

Greedy commercial interest have snatched up far too much of our natural resources for the benefit of the few and now serious consideration is being given to taking another spot for the enrichment of the few.

Facilities not needed to preserve the Fortress, the beaches and the structures important to our history, could be made available for community benefit, retirement homes, etc.

Henry York
845 Buckner Dr.
Winchester, VA 22601

From: jcrdist1@airmail.net [mailto:jcrdist1@airmail.net]
Sent: Tuesday, November 11, 2008 11:46 AM
To: rm@marstel-day.com
Subject: Ft. Monroe EIS

To whom it may concern:

Please give the public adequate opportunities to participate in the EIS process regarding Ft. Monroe. In addition, please make sure the process includes the evaluation of a wide range of alternatives, including making Ft. Monroe a self-sustaining National Park. The fort is an important historical place for all the citizens of our country and all possible alternative uses should be considered.

Mike McKenzie; 3721 Caruth; Dallas, TX

From: Tracy Ballesteros [mailto:taballesteros@yahoo.com]
Sent: Tuesday, November 11, 2008 11:55 AM
To: rm@marstel-day.com
Subject: Fort Monroe Future

To Whom it May Concern,

As a concerned taxpayer of Virginia, I would like to express my concern over the possible development of the former Ft. Monroe Army Base. Please consider Ft. Monroe for exactly what it is - a very historic Army post with an amazing location and architecture that needs to be preserved for future generations. I hope it will be considered as a possible National Park Service site.

Sincerely,

Tracy Ballesteros
Stafford, VA
540-659-5772

From: Frank Born [mailto:fborn@sbcglobal.net]
Sent: Tuesday, November 11, 2008 12:03 PM
To: rm@marstel-day.com
Subject: Fort Monroe

Dear Sirs,

As a US citizen I encourage you to do the following two things regarding the disposition of Fort Monroe:

* Thorough investigation of a wide range of alternatives,
including possibilities for substantial National Park Service
involvement in a self-sustaining Fort Monroe National Park.
* A plan for substantial public participation in the EIS process.

Sincerely,
Frank Born
San Francisco

From: Mark Drummer [mailto:elmarko13r@yahoo.com]
Sent: Tuesday, November 11, 2008 12:01 PM
To: rm@marstel-day.com
Subject: Fort Monroe

Hi,

I think that the NPS should be able to maintain Fort Monroe as an historical monument to the veterans who served there and provide for a mission that includes presenting the history of our nation, as it relates to Fort Monroe, to the public.
Please allow for the EIS process to involve at least these two things:
* Thorough investigation of a wide range of alternatives,
  including possibilities for substantial National Park Service
  involvement in a self-sustaining Fort Monroe National Park.
* A plan for substantial public participation in the EIS process.

Thanks,
Mark and Sandra I. Drummer

Mark Drummer
Head Coach, Long Island Lightning Junior Wheelchair Basketball Team
elmarko13r@yahoo.com
516-796-6320

From: jwpeagle@aol.com [mailto:jwpeagle@aol.com]
Sent: Tuesday, November 11, 2008 12:12 PM
To: rm@marstel-day.com
Subject: FT. Monroe

It Is most urgent that Ft Monroe become an historic National Park/Monument.
With the great news of this years election---putting our mouths where our hearts are---proving to the world that we are a nation of equal rights and opportunity-----what a great opportunity to have a National Park dedicated to all our citizens with an highlight on the underground railroad and a museum detailing the fight for freedom of African Americans! The time is now. As a direct descendant of the indians who roamed these same shores, we , in Virginia, shold honor all those who have made America a greaf Nation.
J W Peyton Robertson
Colonel USMC Ret
Norfolk, Va 23507

From: jhunt1putt@aol.com [mailto:jhunt1putt@aol.com]
Sent: Tuesday, November 11, 2008 12:14 PM
To: rm@marstel-day.com
Subject: Ft. Monroe

The scope of this study must include:

A thorough investigation of a wide range of alternatives,
including possibilities for substantial National Park Service
involvement in a self-sustaining Fort Monroe National Park.

A plan for substantial public participation in the EIS process.

It is unconscionable that we would exclude these considerations.

Jim Hunt
COL, USA (Ret)

From: Jim Foland [mailto:jfoland@fwpclaw.com]
Sent: Tuesday, November 11, 2008 12:25 PM
To: rm@marstel-day.com
Subject: Fort Monroe-Public Comment Process

Dear Sir - As part of the public comment process on the reuse of Fort Monroe, I wanted to make two comments. 1. I believe the public needs to have substantial input and participation in the enviormental impact statement you are working on. 2. I believe you need to consider all possible alternatives, including reuse as a public national park, rather than looking only at the reuse plan from the Fort Monroe Authority. Thank you for your consideration of my input. James Foland, Kansas City, Missouri.

From: RAHJUNM@aol.com [mailto:RAHJUNM@aol.com]
Sent: Tuesday, November 11, 2008 12:13 PM
To: rm@marstel-day.com
Cc: Corneliussen@Verizon.net
Subject: EIS Process for Fort Monroe

Department of the Army
Fort Monroe, Virginia

What better day for us to encourage the Army to continue the excellent stewardship of Fort Monroe than Veterans' Day! Take the opportunity to consider the alternative of allowing the National Park Service (NPS) to assume responsibility for the entire area of the current Post during the preparation of the Environmental Impact Statement for the Disposal and Reuse of Fort Monroe! Also, we ask that you concurrently prepare a plan for public participation in the EIS process!

There can be no doubt that maintenance of the integrity of the entire Fort is essential for historical purposes. In addition, there are two other major factors which mandate NPS management: environmental preservation and public recreational activities.

The reasons for creation of the original Fort remain unchanged. It is strategically located between the James River and the Chesapeake Bay in the center of an area which borders on land, wetlands and the Bay. It has been environmentally preserved in a pristine state in spite of it's location in the ever expanding Hampton Roads area. The proximity of Fort Monroe to Williamsburg, Jamestown, Yorktown, and the attractions of the Hampton Roads region provide the National Park Service a unique chance to expand public knowledge of the environment and history of the tidewater area. Public and private partnerships must be created to provide responsible management of a self-sustaining Fort Monroe National Park.

My husband and I are both retired, he from the Air Force and I from the Department of Defense. We camp at Fort Monroe and greatly appreciate the historical, environmental and recreational opportunities which should be opened as a result of the base reduction and closure process. Please do not allow developers and private interests to profit from your actions.

We are hopeful that the Army will choose the National Park Service to manage Fort Monroe in its entirety, opening it to all as a valuable addition to the national treasures currently under its competent, professional stewardship.

Sincerely, Colonel and Mrs. Samuel M. Jones, 2271 Providence St.,Falls Church, VA, 22043

From: RBen10@aol.com [mailto:RBen10@aol.com]
Sent: Tuesday, November 11, 2008 12:51 PM
To: rm@marstel-day.com
Subject: Fort Monroe

Please consider a wide range not only of impacts but also of what are called "alternatives" for Fort Monroe. Unfortunately, it appears the Army has declared that it will simply follow the range of alternatives in the Fort Monroe Authority's "Reuse Plan" -- which, despite the National Park Service's availability, omits serious consideration of any national park, self-sustaining or otherwise!

So please have the EIS process to involve at least these two things:
* Thorough investigation of a wide range of alternatives,
including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
* A plan for substantial public participation in the EIS process.

Thank you.

Irene H. Benton

-----Original Message-----
From: Paul Anderson [mailto:paul4789@gmail.com]
Sent: Tuesday, November 11, 2008 1:05 PM
To: rm@marstel-day.com
Subject: Preserving Fort Monroe

Fort Monroe is a truly unique national treasure from its strategic location to its storied history. With the Fort's closure as a military facility, the decision for its future is critical, and possibly, irreversible. Therefore, I'm writing to request that the Environmental Impact Study for the future of Fort Monroe be expanded to include the following:

1. A thorough investigation of all possible alternatives, including substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
2. The opening of the EIS process to include substantial public involvement.

Thank you for your consideration
Paul Anderson

From: JOHN MARY STEINLE [mailto:jfsteinle@msn.com]
Sent: Tuesday, November 11, 2008 1:18 PM
To: rm@marstel-day.com; mrkadler@optonline.net; richard.j.cox1@us.army.mil; gfwilliams607@verizon.net; wawright05@comcast.net; irishjazz@comcast.net; lynnbull@wcps.org; ilyse_goldman@nps.gov; KHulser@nyhistory.org; mcelhinney@aol.com
Subject: Re: Reasons Why Saving Fortress Monroe is a Good Idea

Jim: Marooned as I am out here in Colorado, I was unaware that Fortress Monroe was in danger. We visited there two years ago and no one mentioned closing the post. What exactly is the situation?

I have a special interest because the Museum complex where I work, a ranch headquarters from the 1800's, was originally owned by a female physician who was born at Fortress Monroe while her father was stationed there with the 4th Artillery.
----- Original Message -----
From: mcelhinney@aol.com
To: rm@marstel-day.com ; mrkadler@optonline.net ; richard.j.cox1@us.army.mil ; gfwilliams607@verizon.net ; jfsteinle@msn.com ; wawright05@comcast.net ; irishjazz@comcast.net ; lynnbull@wcps.org ; ilyse_goldman@nps.gov ; KHulser@nyhistory.org
Sent: Tuesday, November 11, 2008 6:27 AM
Subject: Reasons Why Saving Fortress Monroe is a Good Idea

To Whom it may concern--

In the summer of 1992 I visited and made paintings of Fort Monroe over a sustained period. During that time I explored the vicinity; walked the parapet, dined with inhabitants and marveled at the structure's history, setting and architectural beauty.
Far from being the forbidding stronghold the name suggests, the Vaubanesque masonry of Fortress Monroe lies imbedded in one of America's small towns of leafy avenues; brick houses and friendly people. Amid the abandoned barbettes topping the fort's terreplein lie the final posts of Army pets; a touching tribute.
One day as I was painting along the water battery site; post engineer Lt. Col. Jack Miniclier invited me to have dinner with his family. What a pleasure! A tidewater feast with his lovely wife and children; crabcakes and beer in the cool of the evening in an 1819 house on the fort's parade ground. I will never forget the hospitable welcome, received by a stranger.

There are many reasons to save and preserve Fort Monroe. Old Point Comfort is where Anglo-America took root; 1607 landfall for Captains Christopher Newport and John Smith; the building project proclaiming that in military technology, the United States had arrived.
Fort Monroe is part of American biography; Robert E. Lee served here with the engineers while constructing Fort Wool at Rip-raps Island offshore, in the middle of Hampton Roads.
Edgar Allen Poe served here as an artillery sergeant, returning as a civilian in the year of his death to read a new poem "Ulalume" to friends at the Hygeia Hotel. The post served Presidents Andrew Jackson and John Tyler a "Camp David"-style retreat. During the Civil War Fort Monroe was visited by nearly every dignitary in the Union cause from Lincoln to the tens of thousands of US soldiers--black and white--who came through it on their way into action. It was at Fort Monroe that former Confederate president Jefferson Davis--himself a former Army man and graduate of West Point--was imprisoned after his capture.

Fortress Monroe is many things including a relic of a bygone era. The story written on its ramparts is our story--written in stone! Our reverence for memory is a testament to our own capacity for imagination.
If this old fort had been made of flesh and blood instead of stones and mortar, there would be no question of this: Fort Monroe is a great American--a monument to be treasured.

Emphatically,

James Lancel McElhinney, ***Assistant Professor of Art, Pratt Institute Brooklyn NY***

7 practical reasons to save and preserve Fort Monroe.

1. Historical significance and intangible value.

2. Heritage Tourism destination: Fortress Monroe and the Casemate Museum; teaching American history.

3. Recreational tourism destination: Resort-like setting with built-in infrastructure; houses (B&B and timeshare opportunities); services; hotel; churches; restaurants; waterfront.

4. Easy interface with tourism and recreation economies in Chesapeake; Hampton Roads area and Buckroe Beach

5. Easy interface with heritage tourism itineraries & economies linking Williamsburg, Jamestown and Yorktown Battlefield & Surrender site

6. Port of call on the Inland Waterway (recreational)

7. Invigorate economically challenged and predominantly African-American community of Phoebus, Virginia

---

From: Walker, Susan Ms CIV USA IMCOM [mailto:susan.e.walker@us.army.mil]
Sent: Tuesday, November 11, 2008 1:27 PM
To: rm@marstel-day.com
Subject: EIS for Disposal and Reuse of Fort Monroe

To whom it may concern:

I am writing concerning the preparation of an Environmental Impact Statement (EIS) for the disposal and reuse of Fort Monroe, VA. I believe it is in the best interest of the public and the community to consider a wide range of alternatives for the future use/disposition of Fort Monroe. As such, I would request that the following be incorporated during the EIS process:

- Thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park; and
- A plan for substantial public participation in the EIS process.

Thanks for your consideration of this request.

Sincerely,
Susan Walker
2117 Cooks Landing Road
Hayes VA 23072
(757) 788-5193

From: Mike Smythers [mailto:mikesmythers@yahoo.com]
Sent: Tuesday, November 11, 2008 1:59 PM

To: rm@marstel-day.com
Subject: Fort Monroe's future

Dear Sir/Madam;

I ask that every consideration be given to making Fort Monroe a National Park. Many lesser historic places have that distinction and certainly Fort Monroe should be on the list. It is seemingly difficult for us to put ourselves in the place of those before us who had the foresight to see the need to save places of uniqueness for posterity. That same opportunity presents itself to us now. We should not let the paucity of current budget resources or the immediacy of new wealth for a few cause us to relinquish a monumental historical resource for untold numbers of Americans and visitors that could follow. Unfortunately, the future cannot give voice to the need for preservation of current treasure, but if we make the wrong decision I expect we're stuck with it. We need to give the National Park Idea a fair hearing. Thank you,

Michael R. Smythers

From: Peter [mailto:peterfp@gmail.com]
Sent: Tuesday, November 11, 2008 2:07 PM
To: rm@marstel-day.com
Subject: Ft Monroe EIS

Dear U.S. Army representative:
I am interested in Ft Monroe being preserved as a historical and natural preserve and am leery of commercial development which might detract from its physical health and public access. I first visited there as an Army brat visited a friend whose father was stationed there, summer of 1970. The mornings we spent exploring the wildlife on the beach are vivid in my memory and the bounty of nature seem best protected by the prospect of the entire area being preserved as a national park. I hope that the EIS process is as transparent and open to public input as possible. I'm sure there are many alternatives being considered for the development/preservation of such a wonderful place and I believe that public access allows for more ideas to be possible.
Good luck and thank you for your service.
Yours,
Peter Poage
358 Ott St
(PO Box 942)
Harrisonburg, VA 22803
540-574-262
peterfp@gmail.com

```
-----Original Message-----
From: wavannort@earthlink.net [mailto:wavannort@earthlink.net]
Sent: Tuesday, November 11, 2008 2:17 PM
To: rm@marstel-day.com
Subject: Fort Monroe EIS

I understand that the Army is undertaking the preparation of an
Environmental Impact Statement for Fort Monroe in Virginia.

Fort Monroe is a unique location with great potential for future use
for the benefit of the public not just in Virginia, but throughout the
U.S.A.  I urge the Army to assure that the EIS process involves a
```

complete and thorough investigation of a wide range of alternative uses, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park. In my view, any study of the future use of Fort Monroe that does not seriously consider its use as a national park, self-sustaining or otherwise, would be seriously defective.

In addition, the potential public benefit from the future use of Fort Monroe is so great that the Army must provide for substantial public participation in the EIS process.

Sincerely,

W. A. Van Nortwick
Tallahassee, FL

From: BedlamFarm@aol.com [mailto:BedlamFarm@aol.com]
Sent: Tuesday, November 11, 2008 2:21 PM
To: rm@marstel-day.com
Subject: Fort Monroe

To Whom it may Concern,

It is my understanding that an Environmental Impact Study will be conducted at Fort Monroe. Two strong suggestions for inclusion:
1. The National Park Service should play a major role in a self- sustaining Fort Monroe.

2. And the public should also have a major role in the EIS.

Substantial participation by these entities are essential to the preservation of this National Treasure.

Thank you.

Marian Larkin
PO 177
Middlebury, CT 06762

From: alisea mcleod [mailto:aliseamcleod@hotmail.com]
Sent: Tuesday, November 11, 2008 2:34 PM
To: rm@marstel-day.com
Subject: Fortress Monroe

Dear Sir or Madame:

I am writing to express my belief that Fortress Monroe should be considered as a National Park. I am aware that the site is presently undergoing a scope study to determine its future uses. I hope you will consider alternative ones including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park. I hope you will also consider a plan for substantial public participation in the EIS process.

Cordially,
Alisea Williams McLeod, Ph.D.

-----Original Message-----
From: caroline hancock [mailto:sailorette53@gmail.com]

Sent: Tuesday, November 11, 2008 3:12 PM
To: rm@marstel-day.com
Subject: Fort Monroe

Dear Sir or Madam,

In the case of the Fort Monroe complex in the Reuse Plan, it appears that the consideration of its use as a possible National Park is not included seriously.

Is it possible to look at alternatives beyond the Reuse Plan, and take into consideration its use as a historic National Park? I believe that action should be a major priority. As a a national park, the complex can be self-sustaining, and the people of this nation who appreciate the value of our heritage will help with this effort whenever possible.

Thank you for your consideration in this matter.

Sincerely,
Caroline R. Hancock
North Carolina

From: Scott Gutzke [mailto:sgutzke@lycos.com]
Sent: Tuesday, November 11, 2008 3:27 PM
To: rm@marstel-day.com
Subject: Fort Monroe: A Proud History and a Promising Future

Dear Sir,

I am writing on behalf of the Citizens for a Fort Monroe National Park. I would like to see the fort preserved as a national park because I think it would be a fitting tribue to the soldiers who served there and all of the historic events that happened there. We are calling for the EIS process to involve at least these two things:
* Thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
* A plan for substantial public participation in the EIS process.

As a veteran myself, I would be very proud to see our military heritage preserved for future generations to enjoy. The fort is unique in American history and we cannot afford to lose it to the wrecking ball.

Thank you for your time.

Scott Gutzke
former SSG, FA, U.S. Army

-----Original Message-----
From: Jim Leach [mailto:jleach@isgins.com]
Sent: Tuesday, November 11, 2008 3:46 PM
To: rm@marstel-day.com
Subject: Support for Ft Monroe

Please note the below, and my associates and I support this as stated; thanks

James G. Leach jd cpcu clu
Executive Vice President
678 742 6335 (direct)
678 634 2345 (cell)
678 742 6301 (fax)
jleach@ISGins.com

Between now and Wednesday afternoon, will you help Fort Monroe by e-mailing a brief comment to the Army as part of a public comment process? At Citizens for a Fort Monroe National Park (CFMNP.org), we hope that friends of Fort Monroe -- both within and beyond Virginia – will contribute the two or three minutes that this simple but important task requires. Every voice counts! This is a good way to make a real contribution to the cause.

Recently the Army issued a "Notice of Intent To Prepare an Environmental Impact Statement (EIS) for Disposal and Reuse of Fort Monroe." The Army also held an October 28 public "scoping meeting" as part of this EIS process. The process can be highly technical, but it's also very important for Fort Monroe's future. And you have a right -- and an opportunity – to tell the Army what you want to see considered within the "scope" of this EIS effort.

We believe it's important for as many citizens as possible to ask the Army to consider a wide range not only of impacts but also of what are Called "alternatives." This is all the more important since the Army has declared that it will simply follow the range of alternatives in the Fort Monroe Authority's "Reuse Plan" -- which, despite the National Park Service's availability, omits serious consideration of any national park, self-sustaining or otherwise!

So we ask that before the deadline of Wednesday evening, Nov. 12, you send an e-mail message to rm@marstel-day.com calling for the EIS process to involve at least these two things:

* Thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
* A plan for substantial public participation in the EIS process.

From: jeff evans [mailto:jeffreymichaelevans@gmail.com]
Sent: Tuesday, November 11, 2008 3:47 PM
To: rm@marstel-day.com
Subject: Ft. Monroe

To Whom it may concern

Fort Monroe is a national treasure. It is a priceless piece of America's story that has stood since the nation's early days. Its hallowed ground has witnessed many a war. Its distinguished land stands proud. The decision of how to reuse Fort Monroe is one of national importance. Please be sure that the decision making process is open, long, and deliberate. Please be sure that the decision making process involves a thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park. Please be sure that the public cam participate in the EIS process.

We only have one Fort Monroe. Let's not mess it up.

Jeff Evans

From: Bill Blackwelder [mailto:wcb99@comcast.net]
Sent: Tuesday, November 11, 2008 4:14 PM
To: rm@marstel-day.com
Subject: EIS for Disposal and Reuse of Fort Monroe

To Whom It May Concern:

I am responding to the Army's "Notice of Intent to Prepare an Environmental Impact Statement (EIS) for Disposal and Reuse of Fort Monroe". As a citizen very interested in the future of Fort Monroe, I would like to see the EIS process include a thorough investigation of a wide range of alternatives for the reuse of Fort Monroe; I am particularly interested in a self-sustaining Fort Monroe National Park administered by the National Park Service. I would also like to see substantial participation by the public in the EIS process.

Thank you for considering these requests.\

Sincerely yours,.

William C. Blackwelder
8613 Hempstead Avenue
Bethesda, MD 20817

From: Don & Jean [mailto:granddaddyslake@va.net]
Sent: Tuesday, November 11, 2008 5:09 PM
To: rm@marstel-day.com
Subject: Historical Fort Monroe

What an historical treasure is Fort Monroe! What a beautiful site for a National Park to preserve that history while providing esthetic and educational opportunities for all visitors! Please make this a Number One priority in the disposal and reuse of Fort Monroe.

Respectfully,

Donald B. Stacy, 3009 Park Blvd., Marion, VA 24354

From: Dave Rosmer [mailto:rosmer1@cox.net]
Sent: Tuesday, November 11, 2008 5:38 PM
To: rm@marstel-day.com
Subject: Ft Monroe

To whom it may concern:

As an almost 30 year veteran of the Air Force Historical Program and a long-time friend and colleague of H.O. Malone, former TRADOC Historian and leader of the movement to make Ft. Monroe a national park, I would like to urge that the upcoming Environmental Impact Statement (EIS) process for Ft. Monroe contain at least a wide range of alternatives including the creation of a self-sustaining national park encompassing the totality of the fort.

I realize that there are many forces at work with regard to this property, mostly because of its prime waterfront location along Hampton Roads, but there are considerations here that go far beyond the mere making of money through development. I do not need to address the historical significance of Ft. Monroe as this is known widely.

What I would like to address is the fact that Ft. Monroe is a unique piece of American history and must be preserved in its entirety, as much as possible, for future generations of Americans to enjoy. I grew up in Charleston, SC and can well remember the neglect and disuse of two important forts there … Sumter and Moultrie … and how both have flourished as part of the National Park Service in the years since that entity assumed control of them. Now thousands of visitors flock to these places every year and that is good not only on the surface, but because it supports the local economy.

I urge the opening of the EIS process to the widest range of participants from the general public so that whatever the eventual resolution of this process becomes, it will have been reached as a consensus of all, not simply those of a few who want to exploit the site for personal or local gain.

Sincerely,
/s/

DAVID L. ROSMER
2313 Bay Oaks Place, Norfolk, VA 23518
D7600 Chairman, Polio Plus (2007-09)
President, Princess Anne Rotary Club at Town Center (2006-07)
President Elect, Rotary Club of Winnsboro, SC (2002)
Past President Rotary Club of Mabalacat, Philippines (1985-86)
District 7600 Chair: Water, Health and Hunger (2005-06)
Co-Author "Handbook for Mass Polioplus Immunization" (1987)
MPHF, BSM, Benefactor

From: Turkeytim01@aol.com [mailto:Turkeytim01@aol.com]
Sent: Tuesday, November 11, 2008 5:42 PM
To: rm@marstel-day.com
Subject: Re: Fw: Ft Monroe: Please comment to Army

It has come to my attention that there is an environmental study pending regarding Fort Monroe in Hampton Rhodes, VA. I would like to voice my support for ensuring that thorough investigation of a wide range of alternatives including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park takes place as a part of that study; and that there is a plan for substantial public participation in the EIS proces.

Please keep me informed of other developments in this decision making process.
Thank you,

Timothy L. Skinner
10472 Edmonds Lane
Delaplane, VA 20144
turkeytim01@aol.com

From: Joshua S [mailto:unus27@yahoo.com]
Sent: Tuesday, November 11, 2008 6:02 PM
To: rm@marstel-day.com
Subject: calling for the EIS process to involve at least these two things:

Thorough investigation of a wide range of alternatives,
including possibilities for substantial National Park Service
involvement in a self-sustaining Fort Monroe National Park.

* A plan for substantial public participation in the EIS process

-----Original Message-----
From: alopstal@cox.net [mailto:alopstal@cox.net]
Sent: Tuesday, November 11, 2008 6:03 PM
To: rm@marstel-day.com
Subject: EIS for Disposal and Reuse of Fort Monroe

To whom it may Concern,

Reference the recent "Notice of Intent" by the US Army to prepare an Environmental Impact Statement (EIS) for Disposal and Reuse of Fort Monroe." and the public scoping meeting conducted on 28 October 2008 as part of the EIS process.

The US Army intention to prepare subject EIS is an important step to determine the environmental burdens that may be placed on the reuse of Fort Monroe.

I understand from the discussions that Army will consider a wide range of Impacts and so called "alternatives". I am most concerned that these "alternatives" include and consider the possibility for a National Park. This is not hypothetical issue but a very real alternative that may be the people choice and become reality in future legislature. If we forego this opportunity to include this option in the lengthy process of this EIS we may loose a lot of time and effort.

In order to make the final EIS document a well coordinated and realistic document please consider early public involvement to include involving the National Park Service.

Appreciate your consideration of my concerns

Albertus (Al) Opstal
901 Darby Road
Virginia Beach, VA 23464
Ph 757-486-5425

From: Web Pages [mailto:webpages2020@yahoo.com]
Sent: Tuesday, November 11, 2008 6:34 PM
To: rm@marstel-day.com
Subject: Comments on Environmental Impact Statement for Disposal and Reuse of Fort Monroe

I have become aware of the Army's "Notice of Intent to Prepare an Environmental Impact Statement (EIS) for Disposal and Reuse of Fort Monroe." During this process it is critical that the Army not consider Fort Monroe as just being surplus property of little historical importance. Old Point Comfort, which became Fort Monroe in 1823, has been an integral part of American history since the early 1600's. It should continue to be public and serve the American people through its abundance of historical, scenic, and recreational assets. It is ideally suited to become a national park.

The Army needs to consider a wider range of not only "impacts" but also of "alternatives" than what is considered in the Fort Monroe Federal Area Development Authority's Reuse Plan, which,

despite the availability of the National Park Service, omits serious consideration of any national park, self-sustaining or otherwise!

I would like to emphasize the following two points:

The EIS process needs to involve a thorough investigation of a wide range of alternatives, including the possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.

There needs to be a plan for substantial public participation in the EIS process.

Sincerely,
Adrian Whitcomb
PO Box 1476
Newport News, VA 23601

From: Neva Adams [mailto:searching4dna@verizon.net]
Sent: Tuesday, November 11, 2008 8:22 PM
To: rm@marstel-day.com
Subject: Fort Monroe

HI, I'm writing to ask that you would please check out all of the possibilities for Ft. Monroe to be a NPS, along with any of the other alternatives that would make it open to a wide range of people to enjoy it from all over the US. We, the people would really like to be involved in the process so it remains a public treasure for our children and our grandchildren to enjoy.
Thank you!
Neva Adams

From: Georgette Lawton [mailto:georgettel1@verizon.net]
Sent: Tuesday, November 11, 2008 8:32 PM
To: rm@marstel-day.com
Subject: Ft. Monroe

I would request that all those who wish be involved in the EIS process as to the future of Ft. Monroe where I lived a wonderful chapter in my life. Alternatives including the area being turned over to the Nat. Park Serv. should also be taken into account.
Jane B. Lawton
1751 2nd Ave - 21T
NY, NY 10128

From: Edward Morgan III [mailto:e3morgan@widomaker.com]
Sent: Tuesday, November 11, 2008 8:47 PM
To: rm@marstel-day.com
Cc: Corneliussen@Verizon.net
Subject: Fort Monroe

I urge the Army to keep development of the Environmental Impact Statement transparent, open to the public, and responsive to citizen input. Moreover, alternatives should recognize that the people of America will want a Fort Monroe National Park, under normal Park jurisdiction, not some hybrid concocted by self-serving economic lobbies. This is a National Treasure.

I grew up in the shadow of and on the fortifications of this Treasure, which has not only military and political history, but also deep social significance. General Samuel C. Armstrong, with his older brother, William Nevins Armstrong, gave safe haven to thousands of freedmen, and the General, of course, founded The Hampton Normal and Agricultural Institute, now Hampton University.

My strong personal interest comes from the fact that my great-grandmother's youngest daughter married Wm. N. Armstrong, the General's older brother. General Armstrong and his brother's wife, the former Mary Frances Morgan, made a formidable team in defining crucial social and economic issues in the monthly journal of Hampton Institute. This whole dimension of Fort Monroe needs development and presentation to the public, and must not be lost or squeezed into a corner amid a jungle of condos, restaurants, and homes for people who have little or no interest in our Nation's heritage.

The Rev. Edward Morgan III, Williamsburg, Va.

From: Wm T Mc Namara [mailto:wnamara@sbcglobal.net]
Sent: Tuesday, November 11, 2008 10:26 PM
To: rm@marstel-day.com
Subject: Re: Ft Monroe

Sir.
I ugently request that for the EIS alternatives in the Ft. Monroe re-use plan ivestigates and exhaust the wide range of alternatives for a self sustaining Ft. Monroe National Park.
I trust and hope that public participation in the EIS Process for this National Treasure is open and availabe.
Sincerely yours,
LTC William McNamara USA Ret.
1601 Fernside Blvd.
Alameda CA 94501

From: John Goddard [mailto:jggoddard@msn.com]
Sent: Tuesday, November 11, 2008 10:30 PM
To: rm@marstel-day.com
Subject: EIS Fortress Monroe

To Whom It May Concern:

Given the unique and irreplaceable historical value of the Fort Monroe base, I would ask that an exceedingly thorough review of all possible options
available for the property and structures during the EIS process to include National Park Service involvement in an innovative self-sustaining Fort Monroe Park. At the very least, the public should be involved in the EIS process to the greatest extent possible.

Sincerely,

John Goddard, MD
Shreveport LA

From: Annette Tollett [mailto:ahtollett@yahoo.com]
Sent: Wednesday, November 12, 2008 5:12 AM
To: rm@marstel-day.com
Subject: Ft Monroe

--- On **Mon, 11/10/08, S. Corneliussen <*Corneliussen@Verizon.net*>** wrote:
From: S. Corneliussen <Corneliussen@Verizon.net>
Subject: Ft Monroe: Please comment to Army
To: Contact@CFMNP.org
Date: Monday, November 10, 2008, 10:05 PM

Between now and Wednesday afternoon, will you help Fort Monroe by e-mailing a brief comment to the Army as part of a public comment process? At Citizens for a Fort Monroe National Park (CFMNP.org), we hope that friends of Fort Monroe -- both within and beyond Virginia -- will contribute the two or three minutes that this simple but important task requires. Every voice counts! This is a good way to make a real contribution to the cause.

Recently the Army issued a "Notice of Intent To Prepare an Environmental Impact Statement (EIS) for Disposal and Reuse of Fort Monroe." The Army also held an October 28 public "scoping meeting" as part of this EIS process. The process can be highly technical, but it's also very important for Fort Monroe's future. And you have a right -- and an opportunity – to tell the Army what you want to see considered within the "scope" of this EIS effort.

We believe it's important for as many citizens as possible to ask the Army to consider a wide range not only of impacts but also of what are called "alternatives." This is all the more important since the Army has declared that it will simply follow the range of alternatives in the Fort Monroe Authority's "Reuse Plan" -- which, despite the National Park Service's availability, omits serious consideration of any national park, self-sustaining or otherwise!

So we ask that before the deadline of Wednesday evening, Nov. 12, you send an e-mail message to calling for the EIS process to involve at least these two things:

* Thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
* A plan for substantial public participation in the EIS process.

YOUR VOICE REALLY WOULD COUNT, AND THIS ONLY TAKES A COUPLE OF MINUTES. Thanks!

P.S. on a different topic: On election day, those Hampton citizens who were collecting petition signatures concerning Hampton's Fort Monroe ordinance were quite successful. They represent what people overwhelmingly want for Fort Monroe. More information soon about all of this.

-----Original Message-----
From: Robert Myers [mailto:randfjunk@gmail.com]
Sent: Wednesday, November 12, 2008 7:12 AM
To: rm@marstel-day.com
Subject: Ft Monroe Re-use

I am writing this email as a local citizen concerned about the re-use plan of Ft Monroe. I am taking this opportunity to voice my opinion as the EIS is being written.

Frankly I was flabbergasted that the Army's EIS failed to even consider the best use of the property--as a National Park!

In order to properly consider all alternatives fairly, the Army must include the potential re-use of Ft Monroe as a National Park in any re-use or impact study. There really is no other fair way to write this study but to include the National Park Service involvement as one of the alternatives.

Additionally, in the best interest of the public, there should a way to include much wider involvement of public participation in the EIS process.

Robert Myers

From: Kaye Kelly [mailto:kdeux@exis.net]
Sent: Wednesday, November 12, 2008 7:14 AM
To: rm@marstel-day.com
Subject: RE-Use of Fort Monroe

I would like to have a more thorough investigation of various alternatives for the re-use of Fort Monroe, including possibilities for a substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.

I am NOT interested in the greedy developers and the City of Hampton, who are just waiting to get their hands on this lovely historic site and pepper it with condominiums, amusement parks and other JUNK.
PLEASE HELP us save this national treasure.
K W Kelly
kdeux@exis.net

-----Original Message-----
From: Wilt, Barbara J ACC Civ USAF ACC ACC/A7OI
[mailto:barbara.wilt@langley.af.mil]
Sent: Wednesday, November 12, 2008 8:35 AM
To: rm@marstel-day.com
Subject: Ft Monroe EIS

In regards to the preparation for the EIS for Ft Monroe request that you
include the following:

* Thorough investigation of a wide range of alternatives,
  including possibilities for substantial National Park Service
  involvement in a self-sustaining Fort Monroe National Park.

* A plan for substantial public participation in the EIS process.

Thanks,
Barb Wilt
Hampton Resident

From: JOANNE.MORSE@HAMPTONU.EDU [mailto:JOANNE.MORSE@HAMPTONU.EDU]
Sent: Wednesday, November 12, 2008 9:04 AM
To: rm@marstel-day.com
Subject: Fort Monroe

I am sending this email to those concerned with the reuse of Fort Monroe. Hampton Roads is already overburdened with traffic and new housing developments are not wanted or needed. What is needed is a place that will attract tourists and offer a beautiful park setting for the locals. Fort Monroe has such value as an historical landmark and would make a wonderful national park. As a national park Fort Monroe could be self-sustaining and I for one (and I am not alone) would not want to see this beautiful landmark marred by greedy developers.

Not only that, there is a real concern as to the safety of placing numerous condos and apartments on this land where there are only 2 narrow roads in and out. During a disaster this would cause a major problem not only for those trying to flee the fort but to those of us who have to use the same roads to get out of the area. We are already incapable of evacuating everyone unless we make people get out a week ahead of time and that won't happen. Adding yet another several hundred or even a thousand cars is just putting fuel on the fire of catastrophe. This may not be as big an area and New Orleans but it could be as big a disaster percentage wise scaled to the size of the region.

The EIS process needs to include listening to the public because no matter what the government beaurocrats say it is WE THE PEOPLE who pay for everything and it is our right to decide not just the few politicians (and the developers they know) who have $ in their eyeballs. Do not insult us by allowing the politicians to act as if we don't understand. We do and we know what we want for our town and area and it isn't more development.

Thank you for your work in this project,
Sincerely,
Dr. Joanne K. Morse

Joanne K. Morse, Ph.D.
Associate Professor
Dept. of Pharmaceutical Sci.
Hampton University
School of Pharmacy
Hampton, VA 23668
757-727-5671

From: KHulser@nyhistory.org [mailto:KHulser@nyhistory.org]
Sent: Wednesday, November 12, 2008 9:09 AM
To: rm@marstel-day.com
Cc: mcelhinney@aol.com
Subject: Alternative uses for Fort Monroe

Dear Army Officials:

As a public historian and concerned citizen, I would like to make a case for saving historic structures as much as possible at the former army post Fort Monroe, and for considering green and cultural reuses for the fortress. Public participation should be widely encouraged in the Environmental Impact statement, since constituencies can be found in so many layers of the population.

Fort Monroe's significance to American history is obvious, Old Point Comfort was a station for many officers (Robert E. Lee, Abner Doubleday and many others who served in the Civil War,) and the structures themselves are very hospitable to the type tourism that mixes history and contemporary recreation. This sort of synergy is a key note of many current development projects based in historic areas and sites. It would certainly make an excellent National Park Service site, and would allow the army to cooperate in interpreting both the history of soldiers and the growing interest in ports of call that relate to the history of water-borne transportation networks.

Coming from New York city, I would also emphasize that there is a huge interest in reclaiming and redeveloping waterfront areas for public use, and that this is closely tied to enhancing environmental awareness and healthy recreation.

I ask you to please make the public process as creative and inclusive as possible, so that Americans can reap the unforeseen rewards of their long term investment in this important and aged site.

Sincerely,

Kathleen Hulser
public historian
New-York Historical Society
170 Central Park West
New York, NY 10024
(212) 485-9280

-----Original Message-----
From: jennifer adderley [mailto:jenphi2@yahoo.com]
Sent: Wednesday, November 12, 2008 9:20 AM
To: rm@marstel-day.com
Subject: A complete EIS

I urge the Army to ensure that there is 'No development allowed' for development's sake except to make Old Point Comfort a self sustaining National Park for all Americans to enjoy the treasure that it is.
It is also imperative that the Army conduct a complete archival and archaelogical search for the 'Slaves burial grounds' at Fort Monroe, and Old point Comfort, as an inclusive part of the EIS. Once identified, the found burial grounds offers enormous significant scientific studies including Archaeology, Paelentology, and Ancestral identification adding credence to the fact that African American slaves played the greatest role in America's freedom which has not been told. The importance of not being, or remaining, invisible to America, in American history bears on America's integrity, as has been allowed to date of these forgotten patriots.

Philip Adderley - Contraband Historical Society
- Citizens For Fort Monroe National Park

From: Ginny Kay Cox [mailto:ginnykay@verizon.net]
Sent: Wednesday, November 12, 2008 9:26 AM
To: rm@marstel-day.com
Subject: Ft. Monroe Comment

RE: Fort Monroe EIS Process

To Whom it May Concern~

As you prepare the Ft. Monroe EIS we ask that you involve at least the two considerations in our comment below:

Thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park

Plan for substantial public participation in the EIS process

Thank You.

Virginia B. Cox / E.Thomas Cox

From: Will Akers [mailto:wakers@wealthcarecapital.com]
Sent: Wednesday, November 12, 2008 9:27 AM
To: rm@marstel-day.com
Subject: Fort Monroe

To Whom It May Concern:

Fort Monroe is a national treasure which should be preserved as a national park.

The names associated with Fort Monroe make it one of the most historic places in America:

Robert E. Lee	Black Hawk	Edgar Allan Poe
U. S. Grant	Abraham Lincoln	Jefferson Davis
Dwight Eisenhower	Woodrow Wilson	

Fort Monroe is too valuable to be obscured by real estate development whose primary purpose is to fill the tax coffers of Hampton, VA.

Fort Monroe belongs to the American people and is of worldwide interest.

Sincerely,

William B. Akers
Vice President
Wealthcare Capital Management
877-883-7526 Toll Free
804-521-3422 Direct
804-433-1178 Fax
wakers@wealthcarecapital.com

-----Original Message-----
From: gcl58@aol.com [mailto:gcl58@aol.com]
Sent: Wednesday, November 12, 2008 9:30 AM
To: rm@marstel-day.com
Subject: Environmental Impact Statement (EIS) for Disposal and Reuse of Fort Mon

Dear Sir or Madam:

We believe it's important that the Army consider a wide range not only of impacts but also of alternatives when considering the disposal and reuse of Ft. Monroe and not just l simply follow the range of alternatives in the Fort Monroe Authority's "Reuse Plan" which, despite the National Park Service's availability, omits serious consideration of any national park, self-sustaining or otherwise!

We request that the EIS process include as a minimum at least these two aspects:
1) A thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
2) A plan for substantial public participation in the EIS process.

Sincerely,

George & Mary Jane Lawton
11900 Paradise Lane
Oak Hill, VA 20171-1519
703-715-0068

From: Jackie Crowe [mailto:jackiecrowe123@yahoo.com]
Sent: Wednesday, November 12, 2008 9:35 AM
To: rm@marstel-day.com
Subject: Disposition of Fort Monroe

To Whom It May Concern:

Please have the EIS process involve at least these two things:

1. Thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.

2. A plan for substantial public participation in the EIS process.

Thanks you for your consideration.

Sincerely,

Jackie Crowe
757.722.6960 res
757.218.6460 cell
Hampton VA

From: MajorADC@aol.com [mailto:MajorADC@aol.com]
Sent: Wednesday, November 12, 2008 9:40 AM
To: rm@marstel-day.com
Subject: Fort Monroe

To Whom it may concern:
I respectfully request that a thorough investigation of all possible alternatives be conducted insofar as the 'reuse' etc. of Fortress Monroe is concerned; as this significant Civil War site should, in my opinion, be preserved as a site of historical interest.
Is it possible for the NPS to take over the site as part of the National Park System? If so, could it generate enough income to make it self-sustaining?
Too much of our history has been lost already, let us not rush to judgement on Ft. Monroe. What do the locals want? Are they part of the decision making process? As a person with great interest in America's Civil War. let's take our time and not rush to judgement, as once the fort is lost or altered, it cannot be replaced.
Very respectfully,

William E Podszus
Washingtonville, NY

From: wawright05@comcast.net [mailto:wawright05@comcast.net]
Sent: Wednesday, November 12, 2008 10:00 AM
To: rm@marstel-day.com
Subject: Save Ft.Monroe

I am a resident of Virginia and I am in favor of saving Ft. Monroe as a national treasure. My experience there is possibly unique.Some years ago, with a pinhole camera, I made an extended exposure of the cell in which Jefferson Davis spent two years after the Civil War. Alone for half and hour in the dimly lit bowels of the fort, I had an opportunity to reflect on American history and the part the fort had played in it. By remaining open, others will have an opportunity to experience the fort and its environs in their own ways.

I agree on the following:

1. There are possibilities for substantial NPS involvement in a self-sustaining Ft. Monroe National Park

2. There should be substantial public participation in the process.

Willie Anne Wright

From: Cathe Lester [mailto:cllester71@msn.com]
Sent: Wednesday, November 12, 2008 10:28 AM
To: rm@marstel-day.com
Subject: EIS for Disposal and Reuse of Fort Monroe, VA

It is my understanding that the Army is about to begin an Environmental Impact Study on the disposal and use of Fort Monroe, VA. I would like to ask that the Army EIS process include two things: 1) a thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park; and 2) a plan for significant and substantial public participation in the EIS process.

My daughter and son-in-law have been living in quarters in Fort Monroe for the past 2 1/2 years, and I have the opportunity to explore the history of the fort with them and my two granddaughters. The significance of Fort Monroe in American history is something that should not be lost to any American.

Thank you for your time,

Cathe Lester, Ph.D.
El Paso, TX 79934

From: Beth Miller [mailto:elizabethsmiller@embarqmail.com]
Sent: Wednesday, November 12, 2008 10:30 AM
To: rm@marstel-day.com
Subject: Fort Monroe

I am asking, as a native of Hampton, Virginia, that the EIS process include a thorough investigation of a wide range of alternatives including possiblities for substantial National Park Service involvement in a self-sustaining Fort Monroe Nation Park and also a plan for substantial public participation in
the EIS process.

Thank you for your consideration,

Elizabeth S. Miller

From: Audrey Simmons [mailto:audreysimmons_38@hotmail.com]
Sent: Wednesday, November 12, 2008 10:31 AM
To: rm@marstel-day.com
Subject: Ft. Monroe

This is to let you know that I firmly support a self-sustaining Ft. Monroe National Park. DO NOT this site away from American thereby destroying an integral part of American history.,
Audrey Simmons
Williansburg, VA

-----Original Message-----
From: Rick Jones [mailto:rickjones1974@yahoo.com]
Sent: Wednesday, November 12, 2008 10:35 AM
To: rm@marstel-day.com
Subject: Fort Monroe Reuse Plan

Dear Sirs,

As a member of the community local to Hampton and Fort Monroe I think it is important to consider all possible uses of the property we now know as Fort Monroe. I would ask that you please include the following things in the EIS process that you are about to undetake:

1)A thorough investigation of a wide range of alternatives,
including possibilities for substantial National Park Service
involvement in a self-sustaining Fort Monroe National Park.

2)A plan for substantial public participation in the EIS process.

Thank you for your consideration of these issues, that are so important to my community, as you consider the future of Fort Monroe.

Rick Jones
1108 Country Club Road
Newport News VA 23606

From: Bryan and Cindy Moon [mailto:bncmoon2@sbcglobal.net]
Sent: Wednesday, November 12, 2008 10:54 AM
To: rm@marstel-day.com
Subject: Fort Monroe

To Whom it May Concern:

We are calling for the EIS process to involve at least these two things:

* Thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.

* A plan for substantial public participation in the EIS process.

Sincerely,
Bryan and Cindy Moon

From: Jenny Fields [mailto:jfields@mercymedicalairlift.org]
Sent: Wednesday, November 12, 2008 11:01 AM
To: rm@marstel-day.com
Subject: EIS Process

Please include the following in considering the preservation of the history of Fort Monroe:

1. A thorough investigation of a wide range of alternatives for Fort Monroe, including possibilities for substantial National Park Service involvement in a self-sustaining ***Fort Monroe National Park.***
2. A plan for substantial public participation in the EIS process.

Jenny Fields
Mercy Medical Airlift
Air Compassion for Veterans
4620 Haygood Road, Suite 1
Virginia Beach, Virginia 23455
Phone: (757) 318-9174 Ext. 216
Email: jfields@mercymedicalairlift.org

From: Bruce MacNab [mailto:bmacnab@volcano.net]
Sent: Wednesday, November 12, 2008 11:15 AM
To: rm@marstel-day.com
Subject: Fort Monroe

Please add our name to the list of American Citizens who believe that our heritage should be perpetuated in such historic monuments and venues as Fort Monroe. Too much American history has already been rewritten...let's save the integrity of Fort Monroe.

Thank you for your attention.

Dr. Bruce E. MacNab
Cdr. USN Ret.

```
-----Original Message-----
From: clutterman325@cox.net [mailto:clutterman325@cox.net]
Sent: Wednesday, November 12, 2008 11:29 AM
To: rm@marstel-day.com
Subject: Request
```

Respectfully request that the EIS also include alternative use of Ft.Monroe to include National Park Service involvement, as well as increased public participation oppotunity to provide imput. Ft Monroe has been a valued treasure to so many people, in addition to it's historic value. Ideally, a national treasure such as this should remain primarily as a monument such as an ongoing National Park. thank you. Lawrence I. Strauss e-mail clutterman325@yahoo.com.

-----Original Message-----
From: Lloyd Vye [mailto:bdvye@comcast.net]
Sent: Wednesday, November 12, 2008 11:44 AM
To: rm@marstel-day.com
Subject: Fort Monroe Environmental Impact Statement

Please make certain that the EIS process includes substantial public participation, and a thorough investigation of a wide range of alternatives, including the possibility of substantial National Park Service involvement in a self sustaining Fort Monroe National Park.

This is a very significant historical site, worthy of saving for future
generations.

Lloyd Vye
3015 Birchbrook Rd.
Richmond, VA 23228
804 262-9544
bdvye@comcast.net

From: Carter Ficklen [mailto:cficklen@yahoo.com]
Sent: Wednesday, November 12, 2008 1:12 PM
To: rm@marstel-day.com
Subject: Ft. Monroe EIS Comments

Hello,

As a lifelong resident of the lower Virginia Peninsula including 27 years as a City of Hampton resident, I would like to provide the following inputs on the Ft. Monroe Environmental Impact Statement (EIS).

I would like to see the EIS include mechanisms for a thorough investigation of a wide range of alternatives for Ft. Monroe. This wide range of alternatives should include thorough study of all Ft. Monroe including processes for comprehensive National Park Service involvement in a self-sustaining Fort Monroe National Park. Also I request that the EIS include a plan for mechansims and processes for substantial public participation in the EIS process.

Thank you for considering my comments on the Ft. Monroe EIS process.

Sincerely,

Carter B. Ficklen
104 Sussex Court
Yorktown, VA 23693

757-874-9475 (home)
757-291-4058 (office)

```
-----Original Message-----
From: Hernandez, Daniel J SFC RES USAR USARC
[mailto:daniel.hernandez9@us.army.mil]
Sent: Wednesday, November 12, 2008 1:13 PM
To: rm@marstel-day.com
Cc: Daniel.Hernandez@us.army.mil
Subject: Fort Monroe-Enviromental Impact Statement
Importance: High

Howdy,

I would like the EIS to involve at least these two things:
* Thorough investigation of a wide range of alternatives,
   including possibilities for substantial National Park Service
   involvement in a self-sustaining Fort Monroe National Park.
* A plan for substantial public participation in the EIS process.

I would like to see anything and everything done to protect Fort Monroe
 for future generations and regular folks like me....

Thank you,

Daniel J. Hernandez
```

From: Jack Hull [mailto:jackhull@cox.net]
Sent: Wednesday, November 12, 2008 1:16 PM
To: rm@marstel-day.com
Subject: Fort Monroe National Park

As long term residents of the Hampton Roads area, we urge you to conduct a thorough intestigation of the entire range of options for the use of Fort Monroe. We also feel strongly that there must be public participation in the EIS process. This is a national heritage and should not be carved up for an office/industrial park. With proper planning, the site can become a self-sustaining national park for future generations to enjoy.

Thank you for your consideration,

Jack & Marianne Hull

From: Don Erickson [mailto:erickson@bentstvrain.org]
Sent: Wednesday, November 12, 2008 2:24 PM
To: rm@marstel-day.com
Subject: Fort Monroe EIS process

To whom it may concern:

I urge you to investigate the possibility of creating a Fort Monroe National Military Park and to organize the EIS process to include a substantial public participation. Fort Monroe is too important an asset to the nation to allow anything other than transferring it to the National Park Service.

Best regards,
Don Erickson

-----Original Message-----
From: Steve Flora [mailto:floras@netspeed.com.au]
Sent: Wednesday, November 12, 2008 3:15 PM
To: rm@marstel-day.com
Subject: The Future of Fortress Monroe

Hello,

I am one of those that would hope the US Army would work closely with the National Park Service AND such organizations as the Civil War Preservation Trust in determining the future of the treasure that is Fortress Monroe. To have it lost to unwise commercial development after all this time will be something that would be looked back at from the future with condemnation for us in the present IF it is ruined.

Keep the possibilities in place ... the East coast of the U.S. has lost so much to what is ultimately long-term vandalism of history and nature ... here's hoping that Fortress Monroe doesn't turn into yet another of those debacles ....

Regards,
Steve Flora
(a transplanted American, but one who still has great affection for many
parts of the country).

Canberra, Australia.

From: Mark Heaney [mailto:moh90266@yahoo.com]
Sent: Wednesday, November 12, 2008 3:40 PM
To: rm@marstel-day.com
Subject: Fort Monroe Environmental Impact Statement

Dear Sir or Madam:
I write to urge you to solicit broad public participation in the Fort Monroe EIS process and to give serious consideration to the possibility of creating a Fort Monroe National Park under the auspices of the National Park Service. This would be an excellent way to use the Fort Monroe property. Thank you for your attention in this important matter.
Mark Heaney.

From: Janice Melton [mailto:jmm810@eastern.dss.state.va.us]
Sent: Wednesday, November 12, 2008 3:47 PM
To: 'rm@marstel-dsy.com'
Subject: EIS process

Concerning the future of Fort Monroe: Fort Monroe is a historical piece of American History belonging to the public. Therefore please investigate a wide range of alternatives to include a substantial National Park Service involvement in a self-sustaining Fort Monroe National Park. There needs to be substantial public (non-land developers) participation in the EIS process.
Thank you,

Janice Melton, EW II
757-437-3378
757-437-3311 FAX
Human Services
3432 Virginia Beach Blvd.
Virginia Beach, VA 23452

From: Samuel R. Martin [mailto:SRMartinStudio@Earthlink.Net]
Sent: Wednesday, November 12, 2008 4:12 PM
To: Richard Muller
Subject: U.S. Army Fort Monroe EIS Scoping Comments

Richard,

On behalf of my colleagues on the board of directors of Citizens for a Fort Monroe National Park (CFMNP.org), I am composing our organization's Fort Monroe EIS comments and will submit them quite soon. Meanwhile, please accept this message as preliminary statement and as a placeholder. Citizens for a Fort Monroe National Park urges the Army to consider a wider range of alternatives, including national park and National Park Service alternatives, and we also urge the Army to construct and implement a plan for vigorous public participation in the EIS process. Our more complete statement, coming soon, will highlight these two requests and will also itemize some specific environmental impacts that we will be urging the Army to engage. Specifically we ask that

1. A thorough investigation and comparison of a wide range of alternative land use and activity scenarios, including the possibility of a self-sustaining National Park with substantial National Park Service involvement, must be developed and analyzed;
2. A wide range of environmental, transportation, and socioeconomic impacts (both positive and negative) must be evaluated; and
3. A plan for meaningful and frequent public participation in the EIS process should be prepared and presented by the Army, not just a perfunctory two meetings as is currently planned.

Thanks very much.

Sam

Samuel R. Martin
Secretary, Executive Committee
Citizens for a Fort Monroe National Park
(757) 848-1163
(757) 286-0952 (cell)
SRMartinStudio@Earthlink.Net

```
-----Original Message-----
From: David Kiracofe [mailto:tckirad@tcc.edu]
Sent: Wednesday, November 12, 2008 4:13 PM
To: rm@marstel-day.com
Subject: Fort Monroe

I was invited to comment on the Army's future plans regarding the re-
use of the Fort Monroe.  As a history teacher, I would be very
interested in having the Army explore as fully as possible alternatives
that would go toward preserving the Fort complex as a national
```

historical park under the National Park Service. I believe that the site is too historically significant to simply turn over to commercial development. A full range of alternatives should be explored.

I am also concerned that the Army's EIS process should be reasonably open to public participation; this would go a long way in insuring public confidence that this valuable historical site is being properly processed and asessed for its future uses.

Thank you.

David Kiracofe
Professor of History
Tidewater Community College

David Kiracofe
History
Tidewater Community College
Chesapeake Campus
1428 Cedar Road
Chesapeake, Virginia 23322
757-822-5136

From: grrrsw2@netzero.net [mailto:grrrsw2@netzero.net]
Sent: Wednesday, November 12, 2008 4:22 PM
To: rm@marstel-day.com
Subject: Fort Monroe

Subject: Fort Monroe

>Ladies or Gentlemen:
>
>Fort Monroe is a national treasure which should be preserved as a
>national park.
>
>The names associated with Fort Monroe make it one of the most
>historic places in America:
>
> Robert E. Lee Black Hawk Edgar
Allan Poe U. S. Grant
>
> Abraham Lincoln Jefferson Davis
Dwight Eisenhower Woodrow Wilson
>
>Fort Monroe is too valuable to be obscured by real estate
>development
>whose primary purpose is to fill the tax coffers of Hampton, VA.
>
>Fort Monroe belongs to the American people and is of worldwide
>interest.
>
>Sincerely,

Donald C. Turnes
RMSN 1954-58

From: James Dillard [mailto:dillardmail@yahoo.com]
Sent: Wednesday, November 12, 2008 4:29 PM
To: rm@marstel-day.com
Subject: Fort Monroe Park

I cannot imagine that there would be any opposition to making part of Ft. Monroe as a national pork. Nor can I believe that the government would pass up the opportunity to preserve this historical site. Please include in your EIS alternative uses for the area and specifically its use as a park. Retired State Delegate and frequent visitor to Ft. Monroe some years ago, Jim

James H. "Jim" Dillard,II
4709 Briar Patch Ln.
Fairfax, VA 22032
703 323 7354
dillardmail@yahoo.com

From: Christy Everett [mailto:CEverett@savethebay.cbf.org]
Sent: Wednesday, November 12, 2008 4:40 PM
To: rm@marstel-day.com
Cc: Ann Jennings - ext. 301
Subject: Notice of Intent To Prepare an Environmental Impact Statement

To Department of the Army, DoD:

From: Christina M. Everett, Chesapeake Bay Foundation

Re: [Federal Register: September 19, 2008 (Volume 73, Number 183)] [Notices]
Notice of Intent To Prepare an Environmental Impact Statement (EIS) for Disposal and Reuse of Fort Monroe, VA, Resulting From the
2005 Base Closure and Realignment Commission's Recommendations
The Chesapeake Bay Foundation submits the following comments:

The Chesapeake Bay Foundation recommends consideration of a wide array of alternatives, including the potential for a National Park at Fort Monroe and the investigation of it becoming a self-sustaining National Park.

The Chesapeake Bay Foundation will be looking for an EIS process that provides for substantial public participation.

Note: Please notify Chesapeake Bay Foundation of any future meetings, public notices, etc... for this issue as you progress forward. My contact information is below.

Sincerely,
Christy Everett
Chesapeake Bay Foundation

142 W. York St., Ste. 618
Norfolk, VA 23510
622-1964 x304
ceverett@cbf.org
[Federal Register: September 19, 2008 (Volume 73, Number 183)]
[Notices]
[Page 54391]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr19se08-41]

From: Barbara [mailto:lindley620@charter.net]
Sent: Wednesday, November 12, 2008 4:40 PM
To: rm@marstel-day.com
Subject: Fort Monroe "Reuse Plan"

Fort Monroe is a National treasurer. As such, I believe that determining Fort Monroe's future deserves careful consideration, and should include participation by the public and by the National Park Service in the EIS decision-making process.
Signed Barbara Lindley

-----Original Message-----
From: Ann [mailto:anntee@mac.com]
Sent: Wednesday, November 12, 2008 4:50 PM
To: rm@marstel-day.com
Subject: Preservation of Fort Monroe

This is in response to an appeal that came in today's email, regarding the preservation of Fort Monroe.

I am an old lady--born in Virginia in 1932. Though I now live in New York City, my memories of growing up in the Old Dominion are vivid. Our parents always made sure that my sister and I visited, and knew, Virginia's historic locales, which are numerous. I have heard of Fort Monroe for all of my life, and I am really disturbed that this venerable locale is being endangered by development. Forts, in particular, are valuable, especially for young people, because of the unique insight they provide into the history of warfare and related technologies, and because of the vivid glimpse they provide of the history of our country.

This is something we definitely DON'T need to damage or lose. I am writing you in support of the alternatives that are being proposed:

* That we conduct a thorough investigation of a wide range of alternatives, including possibilities for substantial involvement of the National Park Service in developing a self-sustaining Fort Monroe National Park.

* That a plan be devised to ensure substantial public participation in the EIS process.

I trust that a good-faith effort will be made to discover an alternative that will achieve these ends, and spare us yet more alteration of the evidence of Virginia's unique and priceless contribution to the history of our country.

--Ann Thomas Moore

-----Original Message-----
From: Wendy S Cooper [mailto:cooperslndg@juno.com]
Sent: Wednesday, November 12, 2008 5:31 PM
To: rm@marstel-day.com
Subject: Fort Monroe

Dear Sirs:
I am sending this brief email to the Army to help make Fort Monroe a National Park.

I would like:
1-A thorough investigation of a wide range of alternatives including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe national Park.
2. A plan for substantial public participation in the Environmental Impact Statement process.

Thank you for considering my request.

Wendy S. Cooper

From: Louis Guy [mailto:louisguy@cox.net]
Sent: Wednesday, November 12, 2008 5:39 PM
To: rm@marstel-day.com
Subject: EIS preliminary statement for NHS

EIS comments from Norfolk Historical Society

The Vision of the Norfolk Historical Society is for this regional community to recognize and appreciate our rich history in all its dimensions. Old Point Comfort and Fort Monroe lies just north of Norfolk City, prominently visible and accessible. The geographic and historic significance have are imbedded in our nation since it began. The greatest care must be taken now as the U. S. Army begins to leave after almost two hundred years. As a National Historic Landmark District it is of paramount importance that the Federal Government live up to its responsibilities to this National Treasure.

The Norfolk Historical Society urges the Army to consider a wider range of alternatives, including national park and National Park Service alternatives, and we also urge the Army to construct and implement a plan for vigorous public participation in the EIS process. Our more complete statement will highlight these two requests and will also itemize some specific environmental impacts that we will be urging the Army to engage. Thanks very much.

Louis Guy, President
Norfolk Historical Society
P.O. Box 6367
Norfolk VA 23508

From: Diana Parker [mailto:erthshr@comcast.net]
Sent: Wednesday, November 12, 2008 6:10 PM
To: rm@marstel-day.com
Subject: Public Comment--Ft Monroe

"Notice of Intent To Prepare an Environmental Impact Statement (EIS) for Disposal and Reuse of Fort Monroe."

Please add the following:

* Thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.

* A plan for substantial public participation in the EIS process.

Diana Parker
10700 Chalkley Rd
Richmond VA 23237-4048

From: Samuel R. Martin [mailto:SRMartinStudio@Earthlink.Net]
Sent: Wednesday, November 12, 2008 10:50 PM
To: Richard Mueller
Cc: mark.perreault@nscorp.com; Corneliussen@verizon.net; Louis L. Guy
Subject: CFMNP's Fort Monroe EIS Public Scoping Comments

Richard,

As referenced in my earlier e-mail today, here are the Citizens for a Fort Monroe National Park (CFMNP.org) detailed comments relating to the Fort Monroe EIS Public Scoping process. We would welcome an opportunity to sit down with you and your team and provide any information we can provide that will help in developing the Fort Monroe EIS.

We appreciate your diligence and perseverance in performing the necessary complex analyses and documentation required under the National Environmental Policy Act (NEPA).

Sam

Samuel R. Martin, AICP
Secretary, Executive Committee
Citizens for a Fort Monroe National Park (CFMNP.org)
(757) 848-1163
(757) 286-0952 (cell)
SRMartinStudio@Earthlink.Net

```
-----Original Message-----
From: S. Corneliussen [mailto:Corneliussen@Verizon.net]
Sent: Thursday, November 13, 2008 9:14 AM
To: rm@marstel-day.com
Subject: EIS comments (Steven T. Corneliussen)

I ask that the Fort Monroe EIS process involve at least these two
things:
* Thorough investigation of a wide range of alternatives,
   including possibilities for substantial National Park Service
   involvement in a self-sustaining Fort Monroe National Park.
* A plan for substantial public participation in the EIS process.

Thanks very much.
Steven T. Corneliussen
202 Beach Road
Poquoson, Virginia 23662
```

From: Gwyn P. Williams [mailto:gwynp@verizon.net]
Sent: Thursday, November 13, 2008 9:35 AM
To: rm@marstel-day.com
Subject: Re:Fort Monroe

I am a supporter of a study that investigates a wide range of alternatives for Fort Monroe, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.

I also support substantial public participation in the EIS process.

Gwyn Williams
Yorktown VA

From: Security Insurance Agency, Inc. [mailto:secins@cavtel.net]
Sent: Thursday, November 13, 2008 11:39 AM
To: rm@marstel-day.com
Subject: Notice of Intent to Prepare an Environmental Impact Statement

To: Department of the Army, DoD:
From: Joanne Berkley, Bay Care Chapter of the Chesapeake Bay Foundation
Re: (Federal Register: September 19, 2008 (Volume 73, Number 183) (Notices)

The Bay Care Chapter supports the comments of the Chesapeake Bay Foundation as follows:
The Chesapeake Bay Foundation submits the following comments:

The Chesapeake Bay Foundation recommends consideration of a wide array of alternatives, including the potential for a National Park at Fort Monroe and the investigation of it becoming a self-sustaining National Park.

The Chesapeake Bay Foundation will be looking for an EIS process that provides for substantial public participation.

Sincerely,
Joanne Berkley
Bay Care Chapter, CBF
1419 Buckingham Avenue
Norfolk, Virginia 23510
(757) 423-6033
Joanne Berkley - secins@cavtel.net

From: nicholas mihnovets [mailto:nickmihnovets@hotmail.com]
Sent: Thursday, November 13, 2008 11:48 AM
To: rm@marstel-day.com
Subject: Ft Monroe's Future Uses

I am writing you as a voting U.S. citizen and a Virginia resident to voice opposition to commercial development of this historic site. We don't need apts and condos bespoiling this beautiful location and limiting its use to commercial development and denying public at large the perpetual use of a historically significant landmark for the sake of satisfying fleeting and self serving demands of commercial interests.

The best use of Ft Monroe would be as a historic site and a park which will benefit Virginians and the public at large instead of the short term, norrowly focused, profit-oriented commercial interests.

In that regard, I am shocked that establishing Ft Monroe as a historic site and a park is not one of the options the Army is considering, particularly in view of the significant popular support for that option and significant opposition to commercial development of this site. Why?? Is the Army bending to commercial pressure exerted through polital process and ignoring significant popular and public good demands?

As this Army process progresses, I strongly urge the Army to include U.S. Park Service as well as public participation in it. This would afford checks and balances to produce a balanced EIS, which would inlude a historic site/park option.

Thank you
Nicholas P. Mihnovets

From: tmatteson1 [mailto:tmatteson1@mindspring.com]
Sent: Thursday, November 13, 2008 12:32 PM
To: rm@marstel-day.com
Subject: Fort Monroe Reuse plans: Public Comment

RE: US Army Notice of Intent to prepare an
Environmental Impact Statement for disposal
and reuse of Fort Monroe

Dear Madam/Sir,
On behalf of the Sierra Club, I wish to submit comments concerning the disposal and reuse of Fort Monroe.
We request a thorough investigation of a wide range of alternatives for the reuse of Fort Monroe, to include serious consideration of a national park. This would involve the National Park Service, and should consider the possibilities of a self-sustaining national park.
We request a substantial public participation process, during the EIS period.
Please keep me informed, in your decision-making procedures.
Yours very truly,
--Tyla Matteson
Chair, York River Group, Sierra Club
York River Group includes Fort Monroe
and Hampton, Virginia
Address: 4896 Burnham Road,
Richmond, VA 23234
(H) 804-275-6476

NOTE: The following comments were included as an attachment to email **From:** Samuel R. Martin [mailto:SRMartinStudio@Earthlink.Net] **Sent**: Wednesday, November 12, 2008 10:50 PM

Fort Monroe Base Closure Environmental Statement

Public Scoping Process

Comments

Submitted to

Department of the Army
Environmental Division
Directorate of Public Works
318 Cornog Lane
Fort Monroe, VA 23651-1110

Submitted by

Citizens for a Fort Monroe National Park
(CFMNP.org)
P.O. Box 51-097
Fort Monroe, VA 23651

November 12, 2008

I. Introduction

The Citizens for a Fort Monroe National Park (CFMNP.org) is a Virginia non-profit educational organization dedicated to the preservation, protection, and adaptive reuse of the cultural, environmental, scenic, recreational, and natural resources at Old Point Comfort (570 acres) Virginia for the benefit of the people of Hampton, the Hampton Roads region, Virginia, and America. We believe, after much research and careful consideration, that, given Ft. Monroe's long-term status as a National Historic Landmark District (NHLD), and its great value to the nation, inclusion of Ft. Monroe as a self-sustaining (or as near as possible) unit of the National Park Service should be given fair consideration.

The CFMNP is a recognized consulting party in the National Historic Preservation Act Section 106 process regarding reuse of historic Fort Monroe and Old Point Comfort.

We appreciate the opportunity to submit these comments as part of the public scoping process for fulfilling the National Environmental Policy Act (NEPA) process involving Fort Monroe. We welcome an opportunity to speak with Army representatives or contractors during this process to answer any questions or provide additional information further clarifying our comments.

II. Ft. Monroe EIS Public Scoping Process

Based on the Army's Fact Sheet (handout from the October 28, 2008 Public Scoping Meeting), the draft Environmental Impact Statement (EIS) is expected to released in April 2009. At that time, the Army will offer a 45-day public comment public comment period to be advertised in the local newspapers (Daily Press and Virginian-Pilot newspapers). A public meeting for the Draft EIS will be held in May 2009. Notice of the Availability of a Final EIS will be published in October 2009, followed by a 30-day waiting period. The Record of Decision is to be signed in December 2009.

A. Environmental Impact Statement

An Environmental Impact Statement (EIS) needed for fort Monroe. The Army has determined that an EIS is appropriate for the closure/reuse action for Fort Monroe, Virginia. The Army must, by law, keep open all options for what actions should be taken to address the direct, indirect, and cumulative impacts from the proposed action at Fort Monroe.

B. EIS Characteristics

The CFMNP understands that an EIS:

- is the "detailed statement" in the Law (Public Law 91- 190,Section 102(2)(c));
- analyzes the biophysical and socioeconomic effects of a proposed action and alternatives;
- provides a baseline for evaluating effects and identifying potential consequences and required mitigation;
- directly involves the public throughout the process (40CFR 1506.6), with formal public meetings during scoping and review of the draft EIS;

- has as its basis the potential for significant environmental impact associated with the proposed action;
- analyzes and discloses known or suspected context, duration, and intensity of all impacts on the environment (direct and indirect) that may result from implementing the proposed action and alternatives; and
- Presents mitigation measures and their environmental effects that could be taken to lessen impacts.

C. Reasons for Performing an EIS

- ***More Extensive and Documented Public Involvement Required*** **-** The extent of public involvement and documentation of public input by the FMFADA, to date, is inadequate, as shown by the resulting narrowly defined, development-focused reuse alternatives in the approved reuse plan.
- ***Additional Broadly Based Reuse Alternatives Necessary*** **-** Developing a broadly based reuse plan for a National Historic Landmark District with a place in America's history and potential future as a continued grand public place requires that additional reuse alternatives be identified and evaluated.
- ***EIS is Needed to Perform Required Detailed Investigations*** **-** Under the NEPA law, an EIS is required when a proposed action must be investigated in detail. The number, complexity, and potential wide range of impacts from the proposed closure/reuse of Fort Monroe require in-depth study not feasible with an EA. An EIS requires a greater commitment of resources to perform the necessary studies, investigations, and research required to answer questions posed by the proposed alternatives and mitigation measures.
- ***Fort Monroe Closure/Reuse Generates Cumulative Effects Needing Detailed Analysis*** **-** The proposed closure/reuse action has the potential to generate cumulative effects on socio-economics, traffic congestion, utilities, water and air quality, flooding, wetlands, coastal zone, aesthetics, noise, visual impairment, adjacent community sustainability, etc. Performing an EIS provides the tools for appropriate assessment and analysis of potential cumulative impacts from the proposed action and other alternatives.
- ***Scope of Potential Impacts Is Both Local and Regional*** **-** The direct and indirect socio-economic impacts of Fort Monroe's closure alone are significant enough to require an EIS. The effects of closing and reusing Old Point Comfort on the adjacent communities of Phoebus and Buckroe will affect their sustainability and future viability as communities. A thorough evaluation of the socioeconomic effects of closing the Fort and its alternative reuses must also be performed, given the integrated nature of the Hampton Roads economy.
- ***"Context" Requires Careful Examination*** **-** Given the historical, open space, recreational, and locational nature of Fort Monroe, an EIS is uniquely suited to closely evaluate the "context" of the proposed action and alternatives.

D. Thorough Public Involvement Required

To date, and including the proposed schedule for the EIS, the public involvement process is inadequate for a major action by the Army with the scope of Fort Monroe. Without contacting and meeting with all of the stakeholders in the Hampton Roads

Region who would be affected by the proposed closure and reuse actions, the Army is at a distinct disadvantage in "building" and thoroughly evaluating the long-term alternatives for the Fort's future with the scope of the closure of Fort Monroe.

At the Army's public scoping session (October 28, 2008), a representative from the Army Contractor (Marstel-Day) stated that the Reuse Plan developed by the Fort Monroe Federal Area Development Authority (FMFADA), and approved by the Governor, was the basis for determining the reuse alternatives. We disagree with that assumption. The Local Reuse Authority (LRA) had a mission to develop a reuse plan for Fort Monroe that accounted for the desires of a broad range of stakeholders in the Hampton Roads Region. The FADA has now been replaced by the Fort Monroe FADA (FMFADA), but it remains important to note that the FADA's process was severely flawed in many ways:

- The FADA's process focused on (and yielded) only three new residential development options for Fort Monroe, of varying densities, although other issues were identified.
- The FADA's assumption was that the citizens of the City of Hampton were the primary stakeholders, not the citizens of the region.
- Two charettes are not adequate public exposure for developing a thorough reuse plan for a site of the historical, cultural, recreational, and economically viable nature of Fort Monroe.
- The FADA reuse planning process is not a suitable substitute for a separate broadly based public scoping process to be held independently by the Army for Fort Monroe's future.

E. Inadequate Timeframe

A 14-day public comment period for scoping an EIS for an installation with the historic, environmental, and economic significance of Fort Monroe is inadequate. A more reasonable period is 30 days.

A 45-day comment period is insufficient for a proper review and comment on such an important document as a Draft EIS. A 60-day period for public review is more reasonable. The 60-day period should include at least one well advertised, regionally based public meeting for direct feedback and to answer questions about the draft EIS.

F. Additional Public Meetings Needed

For an EIS with the magnitude of Fort Monroe, at least one public meeting should be held to present the draft EIS during its development, answer questions, and receive direct public comments.

G. Broader Advertising Necessary

Notification in the two major local newspapers is not an adequate means of advertising the availability of a public document that plays such an important role in the long-term future of a property under public management for almost 400 years.

III. Alternatives

The Army clearly defines and presents the actual range of alternative land use and activity scenarios it will evaluate for the proposed action. The Army should, at a

minimum, include a No Action Alternative and at least three reuse alternatives. The reuse alternatives should include low, low-medium, and medium densities. Currently these are not well defined.

All alternatives should consider the property ownership and management and the related impacts.

Following are specific comments about both currently proposed alternatives and an additional alternative (self-sustaining National Park):

A. No Action Alternative

Although the Army, through the BRAC process, will conduct a disposal/reuse action for Fort Monroe, the No Action alternative should be developed and evaluated as a baseline against which to compare all others. The No Action alternative would be to continue the mission at Ft. Monroe as of November 2005.

B. Self-Sustaining National Park Alternative

Development and evaluation of a wholly or partially self-sustaining National Park alternative is appropriate for the following reasons:

- Fort Monroe was made a National Historic Landmark District (NHLD) in 1966.
- Old Point Comfort (all 570 acres) has been in public care for 398 years, the protector for the Jamestown settlement, guardian of Washington and Baltimore during the War of 1812, a site of major significance during the Civil War, the training leader for America's Coastal Defense in World Wars I & II, and location of one of the Army's major commands.
- Old Point Comfort and Fort Monroe are the site of much that is crucial in African-American history, including the beginning of slavery in 1619, when the first Africans came to Old Point Comfort, and including the beginning of the end of slavery, when African-Americans seized their own freedom at Fort Monroe long before the Emancipation Proclamation, and including the earliest beginnings of African-American participation in Reconstruction.
- The installation has over 181 historic buildings currently in use and capable of a wide range of long-term uses.
- A site with the national level of historic, cultural, and environmental significance of Old Point Comfort (570 acres) deserves the protection and adaptive reuse by an organization capable of handling such properties -- the National Park Service.

At the original Fort Monroe EA Public Scoping meeting (January 30, 2007), an Army Contractor stated that the National Park Service was approached during the planning process and was not interested in Fort Monroe. By law, the National Park Service (NPS) must be directed (and funded) by Congress to perform resource investigation of a site for potential addition as a unit of the National Park System. The NPS can, and now has, performed a reconnaissance survey of a site (from within its own budget) to evaluate its potential suitability and feasibility to be a national park.

It should be noted that the new Virginia law concerning Fort Monroe, enacted on March 23, 2007, provides the following concerning the reconnaissance survey: "*In formulating a reuse plan for Fort Monroe, the Authority shall give due regard to (i) the site's 400 years of public ownership, (ii) its status as a National Historic Landmark,*

and (iii) its unique natural resources and outdoor recreational opportunities located at the confluence of Hampton Roads and the Chesapeake Bay. The Authority shall request the U.S. Congressional Representative in whose district Fort Monroe is located to seek a reconnaissance survey from the U.S. Department of Interior to help the Authority evaluate whether Fort Monroe should become affiliated with the National Park System to help manage and preserve the historic and natural resources at Old Point Comfort."

The concept at a wholly or partially self-sustaining (hybrid) national park of Old Point Comfort (570 acres) is not that of a classic national park but one of a "living, breathing" area. The term "national park" alone announces a location of national significance -- a special location for all Americans. The self-sustaining aspect of Fort Monroe includes the active adaptive reuse of all buildings, under lease, for residences, businesses, and commerce. Think of Old Point Comfort as a place that celebrates its unique history, environmental, and open space resources, while also being a place to live, work, and play. Those buildings that are not considered historic could be demolished or replaced with buildings that follow the historic context, allowing for "infill only." No or very limited new development would be allowed in the open space areas to the north of the moated fortress, which would negatively impact the viewshed and unique context of the Fort.

Envision a lively, multi-functional and exciting public place! It would include residents who lease homes, parts of homes and apartments in the historic houses and buildings, and businesses compatible with the vision such as boutique hotels, inns, bed-and-breakfasts, restaurants, offices, educational, arts and cultural activities (a summer stock company in the old post theater?), public agencies, a conference center, perhaps some shops, and businesses providing recreational activities for visitors. The historic attractions, including the old fort and the Casemate Museum, would be joined by panoply of recreational opportunities from walking and bike paths, fishing, boating, windsurfing, the beaches, bird-watching, eco-tourism, camping, tennis and fields for team sports. It would be a place for some to live and work, a Central Park for Hampton and Hampton Roads residents, and an iconic tourist attraction known throughout the nation.

Fort Monroe would not stand alone in the public's mind, but rather be the scenic, green and historic centerpiece to a larger attraction including a resurgent Phoebus, Buckroe and Hampton itself. Think Mackinac Island, Chautauqua and Cape May, but *better* and easier to get to for most. With good pedestrian/bicycle connections constructed from Fort Monroe, Buckroe and Phoebus can function together with Fort Monroe as a single powerfully attractive destination and economic engine for Hampton and the region. The private development that cannot go on a publicly owned Fort Monroe can go to Phoebus, Buckroe or other nearby areas. And there will be more new investment overall because a magnificent Fort Monroe will attract far more to its surrounding environs than a Fort Monroe compromised by private development as is the developers' and Hampton's current vision for the property (as reflected in "Draft Reuse Plan" proposed in Fall 2006 by the City of Hampton).

A magnificent public jewel at Fort Monroe will improve the quality of life (and the perception of the quality of life) for the City of Hampton, in particular, and for Hampton Roads overall. The lack of significant, usable, public waterfront open space in Hampton Roads is one obvious competitive shortcoming of our region, as a glance at

any map of San Francisco Bay, Boston, Chicago, or the Potomac shoreline of Washington is quick to reveal.

There are multiple options for management of Old Point Comfort. Following the example of the Presidio in San Francisco, Old Point Comfort could be placed under overall management of a Federal trust, working closely with the National Park Service for protection, maintenance, and interpretation.

An economic analysis of a wholly or partially self-sustaining national park at Fort Monroe should consider both the income and costs directly at old Point Comfort but also in the adjacent Hampton communities of Phoebus and Buckroe and regional impacts on the entire Hampton Roads region. A recent economic analysis performed by the Hampton Roads Planning District Commission (HRPDC) that examined the economic impacts from BRAC actions in the region looked only at Fort Monroe being locked with no future reuse. The HRPDC study could be expanded and modeling performed to include the Fort's transformation into a self-sustaining national park.

There has been a tendency to dismiss some ongoing federal funding for a partially self-sustaining national park. Fort Monroe easily merits a small portion of the National Park Service's $2.2 billion (and, according to President Bush's proposed 2008 budget and proposal for out years beyond until 2016, consistently growing) budget. It is a mistake to dismiss such an option.

C. Low Density Alternative

A low density reuse alternative for Fort Monroe could potentially be the wholly or partially self-sustaining national park alternative. A wholly or partially self-sustaining national park on Old Point Comfort would effectively limit development to replacing some of the existing non-historic buildings, protecting the context of the peninsula, properly managing the open space and coastal lands adjacent to Mill Creek and the Chesapeake Bay, under the stewardship of the National Park Service and/or federal trust.

D. Low-Medium Density Alternative

The low-medium density alternative would include the FMFADA's low density development alternative. The low density development would include "in-fill" development only in the industrial and other designated areas, not including Zone B. The Army should fully specify the conditions of the low-medium density alternative, allowing a thorough evaluation against all other alternatives.

E. Medium Density Alternative

The medium density alternative would include the FMFADA's "medium" density development alternative. It would examine full development of the Zone B area now considered as "undetermined." The Army should fully specify the conditions of the medium density alternative, allowing a thorough evaluation against all other alternatives.

IV. Cultural, Environmental, and Socioeconomic Issues

The Army is required to consider ***ALL*** environmental, cultural, and socioeconomic impacts of the proposed action, focusing on concerns raised by the public and by federal, state and local government resource agencies. The process will help decision makers to

select implementation methods for property transfer and reuse. The EIS must, at a minimum, evaluate and compare among alternatives environmental issues including aesthetics, air quality, community facilities and services, cultural resources, cumulative effects, effects and mitigation, hazardous and toxic substances, land use, natural resources, noise, socioeconomics, traffic and transportation, utilities, and water resources. Of special importance are descriptions of the following specific environmental and socioeconomic issues:

A. Cultural Resources

CFMNP understands that the cultural resources aspect of the NEPA process will be addressed by a Programmatic Agreement (PA) - developed over the past year, now under final review, and expected to be signed in the next few months. A major concern, beyond the mitigation provisions to be assumed by the Army and the activities to be undertaken by the FMFADA and Commonwealth of Virginia, is that the EIS must evaluate the long-term impacts to the NHL from selling the land versus leasing it.

Two additional concerns involve the potential “viewshed” and “cultural landscape” impacts from proposed development on Fort Monroe. The Army has agreed to perform a viewshed analysis and a cultural landscape study as part of its mitigation requirements. The results should be used to evaluate all alternatives identified in the EIS process. [See further discussion below.]

B. Cumulative Impacts

A cumulative environmental effects analysis is required by NEPA for the proposed action at Fort Monroe. The analysis should be performed at several scales -- on-post, local (Hampton area), and regionally. The analysis should include a wide range of resource areas impacted by the base closing and property transfer, including socioeconomic effects, traffic congestion, utilities system capacities, air quality, water quality, stormwater runoff, and aesthetics.

Perhaps one of the most important issues that must be investigated for cumulative environmental impacts is that of the potential for loss of natural areas and open space. A recent study by the Old Dominion University indicates that the open shoreline of the Hampton Roads Region is being lost to development at an alarming rate. The study states that once development occurs along the shoreline, it is effectively lost to the public for generations. Some of the proposed alternatives for Fort Monroe (low-medium and medium density development) will exacerbate the loss of open space and accessible shoreline. The effects of these alternatives on the loss of open space must be carefully evaluated.

C. Viewshed

The issue of "viewshed" is vital to the analysis alternatives for Fort Monroe's future. It is applied to help clarify and quantify the "context" of a site, especially one with a four-hundred-year-old history -- sitting prominently at the entrance to the Chesapeake Bay. The viewshed has been identified by the public, during past Hampton-sponsored planning sessions, as an important part of Fort Monroe. There is nothing more reassuring than the sight of Fort Monroe when arriving by boat from the Atlantic Ocean.

The CFMNP requests that computer-based methodologies, applying geographic information systems (GIS), be used to evaluate the viewshed and the impacts (positive and negative) of each of the proposed alternatives. The viewshed should be evaluated from both on-post and off -post perspectives. Off-post views from Hampton's Phoebus and Buckroe communities, Mill Creek, and the Chesapeake Bay should be included.

D. Context

The issue of "context" is of critical importance to Fort Monroe because of its place in America's entire history, its location at the entrance to the Chesapeake Bay, and its protected status by the Army for over 180 years. Context for Fort Monroe is directly related to the "feel of the place." Upon entering the Fort, there is an immediate feeling of serenity and comfort as one travels the post, seeing the historic buildings and fortress, looking out from the batteries, driving or walking beside the Bay, sitting on Dog Beach, or playing on the open fields with old wind-blown oaks. Several of the proposed alternatives (low-medium density and medium density development) have a significant potential for severely damaging the context of Fort Monroe by adding large areas of new development in sight of the historic structures and creating barriers to the continuity of the open space and potential added open space to the east and north of moated fort when non-historic buildings are removed.

The CFMNP requests that the issue of context be used as a significant evaluation factor in comparing alternatives. The context provided in the No Action Alternative provides an excellent basis against which to compare all others.

E. Natural Areas/Open Space/Beach Access

The Army cannot dismiss the inadequacy of planning for the proper use by the public of existing and created open space. The creation of green space by elimination of unneeded and non-historic Army operations support structures and the use of existing green space for public recreation are inadequately addressed. Recreational use of the Fort Monroe lands is a component of the impact of the closure of Fort Monroe and needs to be addressed.

Unfortunately the approve reuse plan for the proposed development by the FMFADA does not include management plans for protection, enhancement, or restoration of natural areas, open spaces, wetlands, and beaches. All proposed alternatives should include a broadly based plan for natural areas, open space, wetlands, and beach management.

F. Socioeconomic Issues

The socioeconomic issues surrounding the closing of Fort Monroe are important and must be thoroughly studied. The direct, indirect, and cumulative effects of the proposed action and alternatives should be modeled using a regionally based economic model such as the one used by the Hampton Roads Planning District Commission (HRPDC). The self-sustaining National Park alternative should be examined by considering creation of jobs as people are hired to work in the park, others as contractors are also hired, new housing (outside) the fort is built to support those who are drawn to the area, existing and new business required to support locals and tourism. The FMFADA’s (and the EIS) proposed alternatives must also be evaluated for traffic, utilities, flooding, water quality, and visual impairment (context impairment) problems created if a significant number of new homes are built on the Fort.

G. Water Quality

Fort Monroe, adjacent to tidal waters of Mill Creek and the Chesapeake Bay, has the potential to affect the water quality both directly and indirectly. Stormwater runoff directly affects the receiving waters. Wastewater generated on-post is carried off-post to a treatment plant, treated, and released, where it has a potential to affect the receiving waters. The Army must evaluate the potential for all proposed alternatives to affect the water quality of the receiving waters.

H. Wildlife

Fort Monroe is surrounded on three sides by tidal waters inhabited by fish, waterfowl, and other marine life. The Army must examine the impacts (direct and indirect) of the proposed alternatives on the receiving waters and the inhabitants. Fort Monroe's Upper Peninsula (the area from the Bay Breeze Club to the boundary at Dog Beach) is well known by bird enthusiasts as a stopover for migratory waterfowl and other birds. The importance of the natural area must be carefully considered by the Army in evaluating all alternatives and the impacts of those alternatives on the natural area.

I. Coastal Zone Management

The Army must take into account the provisions of the Coastal Zone Management Act and the State of Virginia's actions to achieve compliance when evaluating the proposed alternatives for Fort Monroe.

J. Floodplain

Given Fort Monroe's low elevation and location adjacent to the Chesapeake Bay and Mill Creek, the question of floodplains becomes critical for evaluating proposed alternatives. Lying within the 100-year floodplain, the Army must use the latest storm surge studies for the Hampton Roads Region to investigate the impact of storms of different magnitudes on the proposed alternatives, especially those alternatives that propose new development on Fort Monroe. The Army should also consider the results of current research into the existence and influence of the Rossby Wave on flood elevations in the region, specifically in the vicinity of the Fort. Also, the Army must carefully examine mitigation measures for flooding, including avoidance, and their environmental impacts. The potential for future sea level rise (within the next 100 years) should be included in the expected change in flooding potential.

K. Wetlands

The tidal wetlands at the north end of Fort Monroe, at the headwaters of Mill Creek make up a large area and greatly influence the water quality, wildlife, and aesthetics of the tidal tributary. All of the proposed alternatives will impact the environmental quality of the wetlands (some positively and others negatively). It is important that the Army properly evaluate the direct and indirect impacts on the wetlands and the influence of the wetlands on the future of Old Point Comfort.

L. Traffic Access

Transportation in the Hampton Roads Region is reaching a critical stage of frequent congestion. One of the most problematic highways, I-64, is adjacent to Fort Monroe and the major artery for exiting the Fort. The Army must evaluate the effects of each of

the proposed alternatives on both the local (Hampton) and regional transportation network.

M. Aesthetics

The issue of aesthetics is interrelated with "viewshed" and "context" (discussed above). The Army must include aesthetics as an important factor in comparing the proposed alternatives.

N. Sustainable Community Development

Concern for the future of our planet has created new concerns for sustainability within government, the private sector, and even down to the local community level. The Army has entered the "new horizon" with its LEED program and emphasis on "green" design. The Army has begun implementing green environmental design at Fort Monroe, as evidenced by the porous parking lot in the front of Building #5, located inside the moat. The state of technology for green design has advanced to the point that it is comparable in cost to conventional technology. Examples of green, sustainable design are proliferating throughout the Mid-Atlantic region, many of which are applicable to existing development as well.

The degree to which a proposed alternative meets that of a sustainable community through development, redevelopment, protection, and restoration of its resources should be examined and the results compared among alternatives. The Army should examine those green, sustainable technologies that are applicable to the unique characteristics of Fort Monroe with its numerous historic buildings, solar and wind exposure, and significant open space. The technologies that are most applicable should be recommended for the proposed alternatives to increase the Fort's sustainability as a community for the future. Implementation of the sustainable technologies also offers opportunities to showcase how a sustainable property works.

One tool, the analysis of an "ecological footprint" for an area could be used to quantify the potential impact of a proposed alternative on the future of Fort Monroe and Old Point Comfort.

O. Property Ownership

Each of the proposed alternatives the Army should consider a range of future owners and their capacities for adequately managing Fort Monroe for the long-term future. The Army must consider not only the Commonwealth of Virginia, but also the FADA, the National Park Service, a Federal Trust, and other possible owner-manager combinations capable of protecting and maintaining the historic resources on Old Point Comfort, recreational opportunities, and economic return. One such example of a "hybrid" form of ownership and management is the Presidio of San Francisco that employs a federally designated Trust working cooperatively with the National Park Service.

P. Stormwater Runoff

Stormwater runoff from Fort Monroe provides a potentially significant impact on adjacent receiving waters. The Army should apply the latest quantitative methodologies to evaluate the quantities, magnitudes, and timing of pollutants that may be generated from the proposed alternatives and Best Management Practices (BMPs) to reduce or eliminate the impacts on receiving waters. Of special concern is the potential

for increasing residentially-based development alternatives proposed by the FMFADA's Reuse Plan and the effects on receiving waters.

Q. Infrastructure & Utilities

The Army should quantify the capacities of and demands on all utilities at Fort Monroe from implementation of each proposed alternative. The results should be compared among alternatives to define those alternatives creating both positive and negative impacts on the utilities. Further, the "critical infrastructure" at Fort Monroe should be identified and examined for potential failures during catastrophes such as hurricanes, pandemics, etc.

R. Project Area of Concern

The NEPA scoping exercise includes defining the boundaries for the study. For Fort Monroe, the Army must analyze the proposed alternatives at several scales. Of course Old Point Comfort (the 570-acre Lower Peninsula) is the center of investigation. Also, the adjacent City of Hampton and its Phoebus and Buckroe communities (located adjacent to the Fort) must be considered for both direct and indirect impacts. For evaluation of specific issues such as socioeconomics and transportation, the entire Hampton Roads Region (16 local jurisdictions) must be included in the analysis.

V. An EIS is Required

A. NEPA Analysis Plan of Action (NAPA)

To our knowledge the Army has not released (made available to the public) the NEPA Analysis Plan of Action (NAPA) for Fort Monroe. We understand that, as included in its 12 principal elements, the purpose of the NAPA is to ensure that proposed actions, alternatives, and timelines are consistent with Army policy and that Army participants are consistent in applying the process from the beginning. Of specific importance for the public to understand is: a description of the action, the alternatives to be covered in the analysis, the level of NEPA analysis proposed, and the rationale for level of NEPA documentation, and any supporting documents. As a result, we do not understand the reasoning why the Army has chosen to perform an Environmental Assessment (EA) rather than a full Environmental Impact Statement (EIS), given the complex historical, environmental, and socioeconomic issues at Fort Monroe.

VI. CFMNP Contact Information

For further information or questions concerning CFMNP's Public Scoping comments contact:

Citizens for a Fort Monroe National Park
P.O. Box 51-097
Fort Monroe, VA 23651
CFMNP.org

Attention:
Samuel R. Martin, Secretary
Phone: (757) 848-1163
SRMartinStudio@Earthlink.Net

Appendix G: Scoping Meeting Transcript

CERTIFIED ORIGINAL

PUBLIC SCOPING

MEETING

FORT MONROE BRAC

ENVIRONMENTAL IMPACT STATEMENT

October 28, 2008

Hampton, Virginia

TAYLOE ASSOCIATES, INC.

Registered Professional Reporters

Telephone: (757) 461-1984

Norfolk, Virginia

1 APPEARANCES:

2 Colonel Anthony P. Reyes,

3 Garrison Commander, Fort Monroe

4

5 Rich Muller, Consultant

6

7

8

9 Public Speakers:

10 Sam Martin

11 Bob Edwards

12 Tom Howard

13 Councilwoman Angela Leary

14

15

16

17

18

19

20

21

22

23

24

25

1 P R O C E E D I N G S

2 COL. REYES: Good evening, everyone.

3 Please -- if you haven't found a seat yet, I think we

4 have plenty available.

5 Okay. My name is Colonel Tony Reyes.

6 I'm the Garrison Commander out at Fort Monroe. And I

7 want to welcome you-all here this evening.

8 Part of my day-to-day responsibilities at

9 the quarter are for management and operation.

10 Additionally, I am also responsible for the execution

11 of BRAC 2005.

12 What we want to do here tonight is --

13 basically, the purpose of our meeting is to share with

14 the public and you part of our responsibilities

15 regarding the National Environmental Policy Act. And

16 really what we want to get down to is sharing with you

17 our plan as we move forward in our environmental

18 impact statement and actually take comment from you.

19 Now, under the NEPA -- over the next

20 year, the Army will prepare an environmental impact

21 statement that will address the proposed closure

22 disposal of Fort Monroe. Our analysis will not

23 address the BRAC decision to close Fort Monroe, as

24 that decision is exempt from the requirements of NEPA.

25 And the requirement to close the base is now dictated

1 in public law.

2 What I'm going to do at this point in

3 time is turn the microphone over to Mr. Richard

4 Muller, a contractor working for the Army to develop

5 EIS. He will follow me and explain in detail this

6 process.

7 Richard.

8 MR. MULLER: Thank you, Colonel Reyes.

9 There's a lot of ways I can go with this

10 presentation, but I'll stick to the script. This is a

11 legal requirement to have a public scoping meeting.

12 We have a court reporter here tonight who will be

13 taking your comments when my prepared comments are

14 finished. So I don't want this to be some

15 motivational speech; this is not a political rally,

16 this is not a religious revival meeting; this is

17 legal. So I'll stick with the script as best I can.

18 And you don't want me to wander anyway, because you

19 don't know where I'll go. So from this point on it's

20 pretty much prepared comments.

21 In addition, I'd like to thank again

22 Colonel Reyes for opening this meeting up to you. I

23 welcome all of you here tonight. Thank you for coming

24 and thank for your interest.

25 The purpose of tonight's meeting, as

1 Colonel Reyes said, is to give you the opportunity to
2 be part of the public involvement process required by
3 the National Environmental Policy Act.
4 Army guidance requires that a formal
5 environmental impact statement be prepared for all
6 base closure actions. For Fort Monroe, the Army has
7 determined the level of that analysis to be an
8 environmental impact statement, or simply an EIS.
9 When completed, this document will inform
10 the public, you, of the proposed action, alternatives
11 to the proposed action, and likely environmental
12 consequences of those actions. It will also describe
13 any measures that will need to be taken to mitigate
14 any effects of those actions. When I say "proposed
15 actions," that will be after the EIS is completed.
16 Right now we're not in reposed action stage. We don't
17 know what that is, and this is why everybody is in
18 public comment, so it may sway the course of what we
19 decide to do, what the Army decides to do.
20 By law, the decision to close Fort Monroe
21 cannot be changed. The President approved the
22 Commission's recommendation to close Fort Monroe and
23 relocate most of the Army tenant organizations to
24 Ft. Eustis. These include headquarters of Army
25 TRADOC, Installation Management Command, Network

1 Enterprise Technology Command, and the Army
2 Contracting Agency. Going to Fort Knox, Kentucky,
3 will be the Army Cadet Command and Army Accessions
4 Command.
5 The Army's proposed action at this point
6 is to dispose of the excess federal property on Fort
7 Monroe by September 15th, 2011. The reason Fort
8 Monroe is not an Army project but will be evaluated in
9 the EIS is because reuse is a secondary action
10 resulting from disposal.
11 Can I have the next slide, please.
12 This brings us, again, to the purpose of
13 the meeting tonight, which Colonel Reyes has already
14 laid out, and I'm just going to have a little
15 background slide showing Fort Monroe.
16 Next slide, please.
17 This is all in your handout that's been
18 prepared for you so there's no need to dwell on that.
19 Next slide, please, Chris.
20 This is Fort Monroe. It's a beautiful
21 area, aerial of a beautiful location.
22 Beginning over two years ago, many of you
23 became involved with presenting ideas on how to reuse
24 Fort Monroe. On August 20th of this year Governor
25 Kaine signed -- approved and signed a reuse plan that

1 was prepared by the Fort Monroe Federal Area
2 Development Authority. I don't think I want to say
3 that anymore tonight. We'll call it the FMFADA. And
4 the end result is available online. And if you have
5 any questions about the plan, the FMFADA is
6 represented here tonight.
7 We have one hand -- excuse me -- we have
8 a question and answer -- we have a question period,
9 not comment period, later.
10 MR. GILLESPIE: I'm just recognizing
11 myself.
12 MR. MULLER: As?
13 MR. GILLESPIE: Josh Gillespie.
14 MR. MULLER: Oh, Josh, yes. Well, I
15 thought Julie would also, you know -- go ahead, Julie,
16 you may put your hands up.
17 The FMFADA is represented by these two
18 individuals and they are here tonight.
19 Thank you, Josh. I didn't -- I only met
20 you once and didn't quite recognize you.
21 MR. GILLESPIE: That's why I stood up.
22 MR. MULLER: As soon as you said your
23 name, I said, yeah, Josh.
24 The end result is available online. If
25 you have some questions about the plan, they are here

1 to help you -- show you -- we have -- there's two
2 graphics here tonight, one FADA brought and the other
3 one we brought. It's the same thing, so either one of
4 those you can look at. One of the members of the FADA
5 will be standing next to it and they can help you
6 through that.
7 If you haven't had a chance to review the
8 entire report, reuse plan, put out by the FADA, I
9 really suggest you do that. It's a really -- gives a
10 good history of Fort Monroe, it gives a background
11 that I won't tell you here tonight. If you are here,
12 you probably know the background of Fort Monroe and
13 its history. But it's really encapsulated very nicely
14 in their report that's available online.
15 The decision to close Fort Monroe was
16 signed by the President in September 2005. Because
17 the facility may change due to the announcement, just
18 saying, oh, we're closing, it just tends to change the
19 character of the installation; people start looking
20 for jobs, so we can't look at the installation anytime
21 after that announcement has been made. It's a
22 snapshot in time when that installation received the
23 announcement for closure, and that's the period of
24 time we have based our analyses on.
25 At the time of the decision, the facility

1 carried a daily -- total daily daytime population of
2 about 3,100, including 1,100 military and 2,000
3 civilian positions and contractors as well. And 800
4 family members were living on the post at the time.
5 Related to the long and significant
6 history that is associated with the property, there
7 are aspects of disposal of Fort Monroe that are
8 especially noteworthy with respect to the proposed
9 action; that is, the federal action is disposal of
10 federal property.
11 Fort Monroe originally started as a
12 colonial installation. It was first occupied in 1610
13 by Fort Algernon -- I won't go through all that
14 history, but it originally was owned by the
15 Commonwealth of Virginia. And eventually the Virginia
16 Militia became part of the US Army, then the federal
17 government became tenants on state property.
18 Later on, the federal government
19 purchased other adjoining properties, and that is the
20 federal property we're talking about, and that's
21 clearly outlined in both of these graphics.
22 And then there's a third type of property
23 called accreted, which is built up adjacent to both
24 state-owned property and adjacent to federal property.
25 And that is still not in dispute, but it's undecided

1 who owns that property. The decision is if the
2 federal built a jetty next to the state shoreline,
3 whose property is it? We're still working on those,
4 and that decision has not yet been made.
5 In the unlikely event the property is not
6 transferred within an agreed upon time and a local
7 reuse authority has not yet -- I said this is
8 unlikely -- is not yet actively seeking reuse
9 opportunities for government facilities, the Army
10 would reduce maintenance on Fort Monroe to a minimal
11 level, enough to leave the buildings pretty much --
12 you can go back in and turn the lights on or -- and
13 they are ready to reuse again.
14 Should that period of time drag on
15 longer, say about six years or so, then we'd go into a
16 long-term caretaker-type status where the buildings
17 would probably need to be refurbished before reuse.
18 During that phase of time, it would only
19 be protected to ensure security of the buildings and
20 to avoid further deterioration. But the water will be
21 cut off, the electric power will be cut off. They
22 wouldn't go in and turn on the switch and start either
23 working or living there.
24 Regarding contaminated sites, over most
25 of Fort Monroe there has been no release, disposal, or

1 migration of petroleum products or hazardous
2 substances. In areas where contamination was found,
3 clean-up activities were primarily needed because of
4 spills or leaks from fuel storage tanks.
5 The Army began the Real Estate Disposal
6 Process by offering any excess property to other
7 military and non military federal agencies for their
8 use. That screening process resulted in no request
9 for use of the property by any agencies, including the
10 National Park Service.
11 A subsequent reconnaissance survey by the
12 National Park Service provided no clear path for Fort
13 Monroe to become a national park. Although being a
14 park is certainly part of the reuse plan, a national
15 park is not.
16 The Army will evaluate two property
17 disposal alternatives: Accelerated disposal and
18 traditional disposal.
19 Accelerated disposal is the Army's
20 preference at this time. For that, there are several
21 methods available. One would be to lease the federal
22 property to a non Army entity. The Army could also
23 transfer the property to another federal agency and
24 arrange for it to be responsible for all environmental
25 cleanup.

1 Another method would be to set -- the
2 transfer of property to a new owner who agrees to
3 perform all environmental compliance activities that
4 are required for the property under state and federal
5 regulations.
6 Traditional disposal is to transfer,
7 dispose of property once environmental remediation and
8 cleanup is complete for each parcel, with any
9 installation. And you'll see parcels on installation
10 are a little different than the FADA parcels.
11 The Army is required to speedily identify
12 uncontaminated properties so it will be available for
13 transfer or disposal without unnecessary delay.
14 Another alternative is putting Fort
15 Monroe into a caretaker status, which I've already
16 described, and that would take about a six-year
17 process before that would have to occur.
18 And then there's also the no-action
19 alternative. Under the no-action alternative, the
20 Army would continue operation at Fort Monroe at a
21 level similar to those occurring prior to the BRAC
22 Commission's recommendation for closure. However,
23 this alternative is not possible because of the BRAC
24 recommendations and they have the force of law. But
25 it will be included as an action because the no-action

1 alternative is required by the Council on
2 Environmental Quality, its regulations, and because no
3 action serves as a benchmark or the baseline against
4 which other environmental effects are measured.
5 The reuse of Fort Monroe will be
6 evaluated as a secondary action. The Army expresses
7 no preference on how Fort Monroe will be reused and
8 because decisions of its reuse can be made by others.
9 The FMFADA has developed its reuse plan
10 based on five essentials. Some of you out there could
11 probably recite them better than I can read them, but
12 I'll read them so I get it right. Protect this
13 historic place and keep it vital; open it up;
14 establish a large-scale open park; seek economic
15 stability; and allow new development within strict
16 limits.
17 Reuse under these essentials will be
18 analyzed within the feasible range of possibilities or
19 intensities within the five land-use planning areas
20 proposed by the FMFADA. And those areas are
21 identified on the geographics.
22 Those areas -- I've not been keeping up
23 with my slides.
24 Can you move forward a little bit. Go
25 back one, please.

1 This just shows -- and this graphic, I
2 see it right over here. The green areas are state
3 property where the bulk of the infrastructure is
4 contained on Fort Monroe. The pink area is federal
5 property. Not all of it is up on the area. Most of
6 area number six is wetlands and subaqueous areas.
7 Area 4.1 is all water. That's the marina. 4.2 is
8 really the only part of the installation that's
9 federal property that has any infrastructure on it to
10 speak of. And the federal action again is disposing
11 of the pink parts.
12 The EIS -- now we can go to the next
13 slide, please.
14 These are the five parcels that the
15 FMFADA has identified. The center, the blue area --
16 purple -- that's the -- that is the inner fort area.
17 That includes the old fort and the moat and the area
18 just at the outside of it.
19 This is a very sensitive mike; I have to
20 be right on top of it.
21 The historic village area, and it also
22 includes the entry gate area. That's to the southwest
23 of the installation. North gate at the top. And
24 there's a north gate area, which is in pink above --
25 adjoining the inner fort site as you move up the --

1 northward, the gray areas, the Wherry Quarter, which
2 is housing, will be partially used. Mostly taken
3 down. And further to the north is the recreation
4 areas and beach areas. There is beach area adjacent
5 to Wherry Quarter also.
6 The EIS will not evaluate in detail any
7 higher-intensity reuse at its current level of
8 activity on the installation at the time of the BRAC
9 announcement.
10 With Fort Monroe status as a National
11 Historic Landmark District and with its numerous
12 structures listed on the National Register of Historic
13 Places, planning for reuse at a higher level of
14 intensity that is now there would probably not be
15 feasible. The FMFADA's reuse plan falls easily within
16 this criteria.
17 A public involvement -- that's why we're
18 having this meeting tonight -- is a key component to
19 the EIS process. The Army will consider including EIS
20 and other substantive issues of concern raised by the
21 public and other agencies, and these will be brought
22 to the EIS.
23 Now, the public involvement process is
24 described in the handout you received, so I'm not
25 going to go through all of this, the purpose of the

1 EIS, the contents of the EIS, and the areas that are
2 considered. You'll see all the resource areas the EIS
3 looks at. Some of these are important for Fort Monroe
4 and relevant here and others are not. Cultural
5 resources are certainly important, traffic is
6 important, order resources are important, coastal zone
7 issues are important at Fort Monroe, but other issues
8 are of less importance.
9 The schedule for the EIS is also in the
10 handout. I think most important you need to know is
11 that on September 19th of this year the -- posted in
12 the Federal Register was a decision to prepare an EIS
13 by the Army. Tonight, October 28th, is a scoping
14 meeting. There will be another meeting after the EIS
15 has prepared the public meeting. We have that
16 scheduled for May of 2009.
17 But the most important meeting -- most
18 important date you need to take away from this meeting
19 is that on November 12th is when your comments are due
20 on this meeting, on the scope of the EIS; what issues
21 did we miss in looking at this environmental impact
22 statement -- and those issues, again, are listed in
23 the NEPA process handout. If you see anything we've
24 missed or areas of particular concern that you would
25 like to see addressed, we need to know what those are,

1 and we need that by November 12th. There are many
2 ways you can let us know what those comments are; we
3 have roving mikes here in the room; you can wave your
4 hand and one of two people -- wave your arm over here,
5 Jennifer. And Bob is over here with the other mike
6 and they will bring that to you.
7 Your comments will be taken by the court
8 reporter -- verbatim unfortunately because I've made a
9 few boo-boos here already. You can also -- if you
10 want to avoid that torture, you can submit your
11 comments in writing. We have comment forms in the
12 back; you can fill those out and leave them here
13 tonight. There's a comment box at the back. You can
14 fill it out and you can take it home empty and fill it
15 out at home, fold it in half and put a stamp on it and
16 send it to the address on the front. You can e-mail
17 me your comments. My e-mail address is on the NEPA
18 process handout sheet. It's at the bottom.
19 And you can also -- without doing the
20 roving mikes, you can privately walk up to the court
21 reporter and he'll take your comments that way. If
22 you have another way you want to supply your comments
23 to us, we'll be happy to hear what that is and we'll
24 probably approve that as well because the point here
25 is to take your comments any way we can get them and

1 get them into the record and consider them. We would
2 really appreciate getting those from you and that's
3 the reason we're having the meeting tonight.
4 I'm going to make --- close out my
5 comments and invite you again to look at the boards on
6 the side. There are people -- resource specialists
7 will be standing next to those boards. And if you
8 have any clarifications you'd like to have made,
9 please talk to those people.
10 If after getting that insight from them
11 you then decide, oh, that reminds me, I want to put
12 something in this document, then you can walk over to
13 the court reporter and tell him and he'll be here
14 until we all go home and/or you can, again, fill out
15 your comments and mail them in that way. So all of
16 those options are here to do that.
17 And I want to thank you now for coming.
18 I appreciate you being here. And that is the end of
19 the formal process from the podium.
20 Now, would anybody like to speak or offer
21 their comments to the group?
22 MR. MARTIN: What about questions?
23 MR. MULLER: This is a scoping meeting.
24 Your questions will be happily taken at the public
25 meeting in May. We're here to gather comments on what

1 you would like -- issues you would like to see
2 addressed in the EIS.
3 MR. MARTIN: How about questions about
4 your process to this point, about where you're at at
5 this point? For example --
6 MR. MULLER: I think we can answer that.
7 MR. MARTIN: For example, does this serve
8 as your NEPA -- your analysis plan of action? Does
9 this serve as your NEPA analysis plan of action? Are
10 you going to issue a formal statement for plan of
11 action for the NEPA EIS?
12 MR. MULLER: I'm not sure what you mean
13 by "plan of action."
14 MR. MARTIN: Well, required to issue a
15 NEPA analysis plan of action called a NAPA, N-A-P-A.
16 And the Army has not issued one that I know of at this
17 point. So does this basically serve -- what you're
18 putting out, is that what serves as the NAPA
19 statement?
20 MR. MULLER: I have no idea what --
21 MS. MILLS: I think you're talking about
22 the notice of intent. And that actually was published
23 on September 19th -- I'm sorry -- on August 19th.
24 MR. MULLER: September 19th.
25 MS. MILLS: September 19th. It's called

1 the notice of intent. And that was published in the
2 Federal Register.
3 MR. MARTIN: The second question I have
4 is -- I'm assuming from what you said, the only other
5 public meeting that you're having is when the draft
6 EIS is completed, and that's supposed to be in May?
7 MR. MULLER: Yes.
8 MR. MARTIN: And that's the next public
9 opportunity to comment?
10 MR. MULLER: You have the opportunity to
11 put a comment between now and November 12th.
12 MR. MARTIN: I'm sorry. Comment on the
13 draft EIS, that's the only other opportunity to --
14 MR. MULLER: There's no draft EIS right
15 now to comment on. The draft EIS is scheduled to come
16 out in April of 2009. It will be followed by a 45-day
17 public review period. And there will be a 60-day
18 agency review period beginning concurrently with the
19 45-day public review period, and that allows the State
20 of Virginia 30 days on top of the 30 days they need to
21 comment on it so they can do the coastal zone
22 management consistency review. So you have 45 days.
23 And the public meeting will be held
24 during that 45-day review time, preferably towards the
25 beginning so there will be opportunities to comment on

1 draft EIS. But right now there is no draft EIS, so
2 there's nothing to question on that.
3 MR. MARTIN: Are you limiting the scope
4 of your area of impact to Fort Monroe itself, to the
5 Peninsula itself, or are you also considering the
6 areas adjacent to it, Phoebus, Buckroe, and other
7 areas in the region?
8 MR. MULLER: I guess the way you should
9 ask -- make that comment is I would like to see the
10 region of influence -- or however you want to call
11 it -- expanded to or reduced to or -- that would be
12 your comment to make.
13 MR. MARTIN: We'll definitely make that
14 comment if you haven't already expanded it.
15 MR. MULLER: Okay. Well, for certain
16 study areas, for certain things we have. The cultural
17 resource is certainly limited to the limits of Fort
18 Monroe. Traffic studies go out beyond that.
19 MR. MARTIN: I want to go back to the
20 National Park Service and the statement that the
21 National Park Service issued on the report based on
22 their brief reconnaissance survey.
23 MR. MULLER: You may.
24 MR. MARTIN: And I think you may have
25 mistaken what they said in that report in that they

1 are not -- I won't go into the detail on it, but
2 basically it's not that they are not interested; it's
3 that at this point they are holding off until there
4 was a formal plan adopted by the FMFADA and then there
5 would be further consideration.
6 So as far as that goes, the national park
7 is not out of the question.
8 MR. MULLER: No, I didn't say they were.
9 I said right now --
10 MR. MARTIN: So you're not planning to
11 include that as an alternative?
12 MR. MULLER: It's not an alternative at
13 this time.
14 MR. MARTIN: My name is Sam Martin.
15 MR. EDWARDS: It would be lesser than one
16 of the other alternatives that we're considering
17 anyway. The high and the medium impact would be
18 higher than the national park -- would that be a
19 correct statement?
20 MR. MULLER: Would the impact of the
21 national park be less than any of the other proposals?
22 MR. EDWARDS: Right.
23 MR. MULLER: We originally would have
24 considered that a low-intensity reuse.
25 MR. EDWARDS: So we're studying the

1 higher volume in that -- in the current EIS; is that
2 your statement?
3 MR. MULLER: That is a true statement.
4 MR. EDWARDS: Right. So it is within the
5 bounds of what we're already studying from; no action
6 to high to medium? It would fall within that?
7 MR. MULLER: If what you're trying to --
8 the point you're trying to make is we should make Fort
9 Monroe a national park, that's not our call to make.
10 MR. EDWARDS: I understand that. My
11 question is your range of alternatives -- you're
12 required to look at a range of alternatives that are
13 feasible?
14 MR. MULLER: That is required by law.
15 MR. EDWARDS: That is required by law.
16 And so far the FMFADA plan does not meet that
17 requirement as it stands. It does not look at a range
18 of alternatives, so you are required to look at a
19 further -- expand that FMFADA plan to a range of
20 alternatives that are feasible, from no action to
21 something at the higher end.
22 MR. MULLER: Does not want to limit its
23 range of alternatives to either -- to precisely the
24 upper limit of the FADA plan or the lower limit. They
25 want to make sure if things change, it goes beyond

1 that, we have encapsulated so we don't have to start
2 this process over exactly.
3 MR. EDWARDS: That's what I was trying to
4 say.
5 Thank you.
6 MR. MULLER: You're welcome.
7 Anybody else?
8 Okay. If anybody is shy, as I said, we
9 have a reporter and -- I'm sorry.
10 MR. HOWARD: My name is Tom Howard; I'm a
11 citizen here in the City of Hampton. When I look at
12 this plan right here, I don't see anything off shore
13 as far as on the EIS plan. Am I not seeing that?
14 What's happening off the post, you know, into the
15 harbor area as far as an environmental assessment?
16 MR. MULLER: In terms of the FADA's
17 plan -- and that is what we're using as our most
18 possible alternative -- the only offshore development
19 that's being considered right now is expansion of the
20 marina to the north and where it now is and a little
21 bit to the south.
22 MR. HOWARD: My concern is have we
23 addressed any cleanup off shore as far as munitions or
24 anything? You know, we have experienced in the past
25 on Buckroe Beach where stuff has washed up. Is there

1 anything in the works to address that?

2 MR. MULLER: Okay. That is your comment

3 and we'll make sure that's in the record.

4 MR. HOWARD: Okay.

5 MR. MULLER: Thank you.

6 Anyone else?

7 Okay. That is the end of the formal part

8 but certainly not the end of tonight, so, please, feel

9 free to roam the room, talk to people if you'd like,

10 submit your comments. And each one of those ways tell

11 me what you've got because we'd like to get that on

12 the list. Other than that, I bid you goodnight.

13 Thank you.

14 COUNCILWOMAN LEARY: Over 18 months ago

15 at one of the council briefings of Fort Monroe I

16 requested a marine impact study be performed to give

17 us an idea of what is in the water around Fort Monroe

18 because Fort Monroe was an FFPF, a fixed firing point

19 facility, for over a hundred years. And I know that

20 the Army keeps track of everything -- every gun that's

21 used, every shell that is shot -- not lobbed, but

22 every shell that goes into a gun is tracked.

23 There's a lot of unexploded ordnance, and

24 we see that migrating onto our shoreline at Buckroe

25 and other places, but what is there that we don't know

1 about?

2 I would like to see the City of Hampton

3 have the same -- and the Commonwealth of Virginia have

4 the same consideration as the Commonwealth of

5 Maryland. Maryland and the Department of Defense have

6 entered into a restoration partnership for the

7 Chesapeake Bay, and that's what we're talking about.

8 These shells have been lobbed into the Chesapeake Bay;

9 and that's what I want, is the same consideration for

10 Virginia.

11 I don't expect a big sum of money for us

12 to spend over, you know, a certain period of time. I

13 expect this to be a partnership for cleanup where both

14 of us are responsible, both state and federal, where

15 those waters are concerned. It didn't happen

16 overnight, so I would like to see us enter into that

17 partnership for a period of time, over a period of

18 time. It's not something that's going to happen

19 overnight, but I don't want to ignore that. It needs

20 to be addressed.

21 (The proceedings adjourned at 8:50 p.m.)

22

23

24

25

1 COURT REPORTER'S CERTIFICATE

2

3

4 I, Scott D. Gregg, Registered Professional
5 Reporter, certify that I recorded verbatim by
6 stenotype the proceedings in the captioned cause
7 before, Hampton, Virginia, on the 28th day of October,
8 2008.
9 I further certify that to the best of my
10 knowledge and belief, the foregoing transcript
11 constitutes a true and correct transcript of the said
12 proceedings.
13 Given under my hand this 10th day of
14 November, 2008, at Newport News, Virginia.

15

16

17

18

19 Scott D. Gregg | MG

20 Scott D. Gregg, RPR

21 Notary Public

22 Notary Registration No. 215323

23

24

25

WORD INDEX

A

about 7:5,25 9:2,20 10:15 12:16 18:22 19:3,3,4,21 26:1,7
above 14:24
Accelerated 11:17,19
Accessions 6:3
accreted 9:23
Act 3:15 5:3
action 5:10,11,16 6:5,9 9:9,9 12:25 13:3,6 14:10 19:8,9,11,13 19:15 23:5,20
actions 5:6,12,14,15
actively 10:8
activities 11:3 12:3
activity 15:8
actually 3:18 19:22
addition 4:21
Additionally 3:10
address 3:21,23 17:16 17:17 25:1
addressed 16:25 19:2 24:23 26:20
adjacent 9:23,24 15:4 21:6
adjoining 9:19 14:25
adjourned 26:21
adopted 22:4
aerial 6:21
after 5:15 8:21 16:14 18:10
again 4:21 6:12 10:13 14:10 16:22 18:5,14
against 13:3
agencies 11:7,9 15:21
agency 6:2 11:23 20:18
ago 6:22 25:14
agreed 10:6
agrees 12:2
ahead 7:15
Algernon 9:13
allow 13:15
allows 20:19
already 6:13 12:15 17:9 21:14 23:5
alternative 12:14,19 12:19,23 13:1 22:11 22:12 24:18
alternatives 5:10 11:17 22:16 23:11 23:12,18,20,23
Although 11:13
analyses 8:24
analysis 3:22 5:7 19:8 19:9,15
analyzed 13:18
and/or 18:14
Angela 2:13
announcement 8:17 8:21,23 15:9
another 11:23 12:1,14 16:14 17:22
answer 7:8 19:6
Anthony 2:2
anybody 18:20 24:7,8
anymore 7:3
Anyone 25:6
anything 16:23 24:12 24:24 25:1
anytime 8:20
anyway 4:18 22:17
APPEARANCES 2:1
appreciate 18:2,18
approve 17:24
approved 5:21 6:25
April 20:16
area 6:21 7:1 14:4,5,6 14:7,15,16,17,21,22 14:24 15:4 21:4 24:15
areas 11:2 13:19,20,22 14:2,6 15:1,4,4 16:1 16:2,24 21:6,7,16
arm 17:4
Army 3:20 4:4 5:4,6 5:19,23,24 6:1,3,3,8 9:16 10:9 11:5,16,22 11:22 12:11,20 13:6 15:19 16:13 19:16 25:20
Army's 6:5 11:19
around 25:17
arrange 11:24
aspects 9:7
assessment 24:15
associated 9:6
ASSOCIATES 1:22
assuming 20:4
August 6:24 19:23
authority 7:2 10:7
available 3:4 7:4,24 8:14 11:21 12:12
avoid 10:20 17:10
away 16:18

B

back 10:12 13:25 17:12,13 21:19
background 6:15 8:10 8:12
base 3:25 5:6
based 8:24 13:10 21:21
baseline 13:3
basically 3:13 19:17 22:2
Bay 26:7,8
beach 15:4,4 24:25
beautiful 6:20,21
became 6:23 9:16,17
become 11:13
before 10:17 12:17 27:7
began 11:5
beginning 6:22 20:18 20:25
being 11:13 18:18 24:19
belief 27:10
benchmark 13:3
best 4:17 27:9
better 13:11
between 20:11
beyond 21:18 23:25
bid 25:12
big 26:11
bit 13:24 24:21
blue 14:15
boards 18:5,7
Bob 2:11 17:5
boo-boos 17:9
both 9:21,23 26:13,14
bottom 17:18
bounds 23:5
box 17:13
BRAC 1:10 3:11,23 12:21,23 15:8
brief 21:22
briefings 25:15
bring 17:6
brings 6:12
brought 8:2,3 15:21
Buckroe 21:6 24:25 25:24
buildings 10:11,16,19
built 9:23 10:2
bulk 14:3

C

C 3:1
Cadet 6:3
call 7:3 21:10 23:9
called 9:23 19:15,25
captioned 27:6
caretaker 12:15
caretaker-type 10:16
carried 9:1
cause 27:6
center 14:15
certain 21:15,16 26:12
certainly 11:14 16:5 21:17 25:8
CERTIFICATE 27:1
certify 27:5,9
chance 8:7
change 8:17,18 23:25
changed 5:21
character 8:19
Chesapeake 26:7,8
Chris 6:19
citizen 24:11
City 24:11 26:2
civilian 9:3
clarifications 18:8
cleanup 11:25 12:8 24:23 26:13
clean-up 11:3
clear 11:12
clearly 9:21
close 3:23,25 5:20,22 8:15 18:4
closing 8:18
closure 3:21 5:6 8:23 12:22
coastal 16:6 20:21
COL 3:2
Colonel 2:2 3:5 4:8,22 5:1 6:13
colonial 9:12
come 20:15
coming 4:23 18:17
Command 5:25 6:1,3 6:4
Commander 2:3 3:6
comment 3:18 5:18 7:9 17:11,13 20:9,11 20:12,15,21,25 21:9 21:12,14 25:2
comments 4:13,13,20 16:19 17:2,7,11,17 17:21,22,25 18:5,15 18:21,25 25:10
Commission's 5:22 12:22
Commonwealth 9:15 26:3,4
complete 12:8
completed 5:9,15 20:6
compliance 12:3
component 15:18
concern 15:20 16:24 24:22
concerned 26:15
concurrently 20:18
consequences 5:12
consider 15:19 18:1
consideration 22:5 26:4,9
considered 16:2 22:24 24:19
considering 21:5 22:16
consistency 20:22
constitutes 27:11
Consultant 2:5
contained 14:4
contaminated 10:24
contamination 11:2
contents 16:1
continue 12:20
Contracting 6:2
contractor 4:4
contractors 9:3
correct 22:19 27:11
council 13:1 25:15
Councilwoman 2:13 25:14
course 5:18
court 4:12 17:7,20 18:13 27:1
criteria 15:16
cultural 16:4 21:16
current 15:7 23:1
cut 10:21,21

D

D 3:1 27:4,20
daily 9:1,1
date 16:18
day 27:7,13
days 20:20,20,22
daytime 9:1
day-to-day 3:8
decide 5:19 18:11
decides 5:19
decision 3:23,24 5:20 8:15,25 10:1,4 16:12
decisions 13:8
Defense 26:5
definitely 21:13
delay 12:13
Department 26:5
describe 5:12
described 12:16 15:24
detail 4:5 15:6 22:1
deterioration 10:20
determined 5:7
develop 4:4
developed 13:9
development 7:2 13:15 24:18
dictated 3:25
different 12:10
disposal 3:22 6:10 9:7 9:9 10:25 11:5,17,17 11:18,19 12:6,13
dispose 6:6 12:7
disposing 14:10
dispute 9:25
District 15:11
document 5:9 18:12
doing 17:19
down 3:16 15:3
draft 20:5,13,14,15 21:1,1
drag 10:14
due 8:17 16:19
during 10:18 20:24
dwell 6:18

E

E 3:1,1
each 12:8 25:10
easily 15:15
economic 13:14
Edwards 2:11 22:15 22:22,25 23:4,10,15 24:3
effects 5:14 13:4
EIS 4:5 5:8,15 6:9 14:12 15:6,19,19,22 16:1,1,2,9,12,14,20 19:2,11 20:6,13,14 20:15 21:1,1 23:1 24:13
either 8:3 10:22 23:23
electric 10:21
empty 17:14
encapsulated 8:13

24:1
end 7:4,24 18:18 23:21 25:7,8
enough 10:11
ensure 10:19
enter 26:16
entered 26:6
Enterprise 6:1
entire 8:8
entity 11:22
entry 14:22
environmental 1:11 3:15,17,20 5:3,5,8 5:11 11:24 12:3,7 13:2,4 16:21 24:15
especially 9:8
essentials 13:10,17
establish 13:14
Estate 11:5
Eustis 5:24
evaluate 11:16 15:6
evaluated 6:8 13:6
evening 3:2,7
event 10:5
eventually 9:15
every 25:20,21,22
everybody 5:17
everyone 3:2
everything 25:20
exactly 24:2
example 19:5,7
excess 6:6 11:6
excuse 7:7
execution 3:10
exempt 3:24
expand 23:19
expanded 21:11,14
expansion 24:19
expect 26:11,13
experienced 24:24
explain 4:5
expresses 13:6
e-mail 17:16,17

F

facilities 10:9
facility 8:17,25 25:19
FADA 8:2,4,8 12:10 23:24
FADA's 24:16
fall 23:6
falls 15:15
family 9:4
far 22:6 23:16 24:13 24:15,23
feasible 13:18 15:15 23:13,20
federal 6:6 7:1 9:9,10 9:16,18,20,24 10:2 11:7,21,23 12:4 14:4 14:9,10 16:12 20:2 26:14
feel 25:8
few 17:9
FFPF 25:18
fill 17:12,14,14 18:14
finished 4:14
firing 25:18
first 9:12
five 13:10,19 14:14
fixed 25:18
FMFADA 7:3,5,17 13:9,20 14:15 22:4 23:16,19
FMFADA's 15:15
fold 17:15
follow 4:5
followed 20:16
force 12:24
foregoing 27:10
formal 5:4 18:19 19:10 22:4 25:7
forms 17:11
fort 1:10 2:3 3:6,22,23 5:6,20,22 6:2,6,7,15 6:20,24 7:1 8:10,12 8:15 9:7,11,13 10:10 10:25 11:12 12:14 12:20 13:5,7 14:4,16 14:17,25 15:10 16:3 16:7 21:4,17 23:8 25:15,17,18
forward 3:17 13:24
found 3:3 11:2
free 25:9
from 3:18,24 4:19 6:10 11:4 16:18 18:2,10 18:19 20:4 23:5,20
front 17:16
Ft 5:24
fuel 11:4
further 10:20 15:3 22:5 23:19 27:9

G

G 3:1
Garrison 2:3 3:6
gate 14:22,23,24
gather 18:25
geographics 13:21
getting 18:2,10
Gillespie 7:10,13,13 7:21
give 5:1 25:16
Given 27:13
gives 8:9,10
go 4:9,19 7:15 9:13 10:12,15,22 13:24 14:12 15:25 18:14 21:18,19 22:1
goes 22:6 23:25 25:22
going 4:2 6:2,14 15:25 18:4 19:10 26:18
good 3:2 8:10
goodnight 25:12
government 9:17,18 10:9
Governor 6:24
graphic 14:1
graphics 8:2 9:21
gray 15:1
green 14:2
Gregg 27:4,20
group 18:21
guess 21:8
guidance 5:4
gun 25:20,22

H

half 17:15
Hampton 1:14 24:11 26:2 27:7
hand 7:7 17:4 27:13
handout 6:17 15:24 16:10,23 17:18
hands 7:16
happen 26:15,18
happening 24:14
happily 18:24
happy 17:23
harbor 24:15
having 15:18 18:3 20:5
hazardous 11:1
headquarters 5:24
hear 17:23
held 20:23
help 8:1,5
he'll 17:21 18:13
high 22:17 23:6
higher 15:13 22:18 23:1,21
higher-intensity 15:7
him 18:13
historic 13:13 14:21 15:11,12
history 8:10,13 9:6,14
holding 22:3
home 17:14,15 18:14
housing 15:2
Howard 2:12 24:10,10 24:22 25:4
hundred 25:19

I

idea 19:20 25:17
ideas 6:23
identified 13:21 14:15
identify 12:11
ignore 26:19
impact 1:11 3:18,20 5:5,8 16:21 21:4 22:17,20 25:16
importance 16:8
important 16:3,5,6,6,7 16:10,17,18
INC 1:22
include 5:24 22:11
included 12:25
includes 14:17,22
including 9:2 11:9 15:19
individuals 7:18
influence 21:10
inform 5:9
infrastructure 14:3,9
inner 14:16,25
insight 18:10
installation 5:25 8:19 8:20,22 9:12 12:9,9 14:8,23 15:8
intensities 13:19
intensity 15:14
intent 19:22 20:1
interest 4:24
interested 22:2
invite 18:5
involved 6:23
involvement 5:2 15:17 15:23
issue 19:10,14
issued 19:16 21:21
issues 15:20 16:7,7,20 16:22 19:1

J

Jennifer 17:5
jetty 10:2
jobs 8:20
Josh 7:13,14,19,23
Julie 7:15,15
just 6:14 7:10 8:17,18 14:1,18

K

Kaine 6:25
keep 13:13
keeping 13:22
keeps 25:20
Kentucky 6:2
key 15:18
know 4:19 5:17 7:15 8:12 16:10,25 17:2 19:16 24:14,24 25:19,25 26:12
knowledge 27:10
Knox 6:2

L

laid 6:14
Landmark 15:11
land-use 13:19
large-scale 13:14
later 7:9 9:18
law 4:1 5:20 12:24 23:14,15
leaks 11:4
Leary 2:13 25:14
lease 11:21
leave 10:11 17:12
legal 4:11,17
less 16:8 22:21
lesser 22:15
let 17:2
level 5:7 10:11 12:21 15:7,13
lights 10:12
like 4:21 16:25 18:8,20 19:1,1 21:9 25:9,11 26:2,16
likely 5:11
limit 23:22,24,24
limited 21:17
limiting 21:3
limits 13:16 21:17
list 25:12
listed 15:12 16:22
little 6:14 12:10 13:24 24:20
living 9:4 10:23
lobbed 25:21 26:8
local 10:6
location 6:21
long 9:5
longer 10:15
long-term 10:16
look 8:4,20 18:5 23:12 23:17,18 24:11
looking 8:19 16:21
looks 16:3
lot 4:9 25:23
lower 23:24
low-intensity 22:24

M

made 8:21 10:4 13:8 17:8 18:8
mail 18:15
maintenance 10:10
make 18:4 21:9,12,13 23:8,8,9,25 25:3
management 3:9 5:25 20:22
many 6:22 17:1
marina 14:7 24:20
marine 25:16
Martin 2:10 18:22 19:3,7,14 20:3,8,12 21:3,13,19,24 22:10 22:14,14
Maryland 26:5,5
may 5:18 7:16 8:17 16:16 18:25 20:6 21:23,24
mean 19:12
measured 13:4
measures 5:13
medium 22:17 23:6
meet 23:16
meeting 1:9 3:13 4:11 4:16,22,25 6:13 15:18 16:14,14,15 16:17,18,20 18:3,23 18:25 20:5,23
members 8:4 9:4
met 7:19
method 12:1
methods 11:21
microphone 4:3
migrating 25:24
migration 11:1
mike 14:19 17:5
mikes

17:3,20
military 9:2 11:7,7
Militia 9:16
MILLS 19:21,25
minimal 10:10
miss 16:21
missed 16:24
mistaken 21:25
mitigate 5:13
moat 14:17
money 26:11
Monroe 1:10 2:3 3:6 3:22,23 5:6,20,22 6:7,8,15,20,24 7:1 8:10,12,15 9:7,11 10:10,25 11:13 12:15,20 13:5,7 14:4 15:10 16:3,7 21:4,18 23:9 25:15,17,18
months 25:14
most 5:23 10:24 14:5 16:10,17,17 24:17
Mostly 15:2
motivational 4:15
move 3:17 13:24 14:25
much 4:20 10:11
Muller 2:5 4:4,8 7:12 7:14,22 18:23 19:6 19:12,20,24 20:7,10 20:14 21:8,15,23 22:8,12,20,23 23:3,7 23:14,22 24:6,16 25:2,5
munitions 24:23
myself 7:11

N

N 3:1
name 3:5 7:23 22:14 24:10
NAPA 19:15,18
national 3:15 5:3 11:10,12,13,14 15:10,12 21:20,21 22:6,18,21 23:9
need 5:13 6:18 10:17 16:10,18,25 17:1 20:20
needed 11:3
needs 26:19
NEPA 3:19,24 16:23 17:17 19:8,9,11,15
Network 5:25
new 12:2 13:15
Newport 27:14
News 27:14
next 3:19 6:11,16,19 8:5 10:2 14:12 18:7 20:8
nicely 8:13
non 11:7,22
Norfolk 1:25
north 14:23,24 15:3 24:20
northward 15:1
Notary 27:21,22
noteworthy 9:8
nothing 21:2
notice 19:22 20:1
November 16:19 17:1 20:11
no-action 12:18,19,25
number 14:6
numerous 15:11
N-A-P-A 19:15

O

O 3:1
occupied 9:12
occur 12:17
occurring 12:21
October 1:13 16:13 27:7
off 10:21,21 22:3 24:12,14,23
offer 18:20
offering 11:6
offshore 24:18
oh 7:14 8:18 18:11
Okay 3:5 21:15 24:8 25:2,4,7
old 14:17
once 7:20 12:7
one 7:7 8:2,3,3,4 11:21 13:25 17:4 19:16 22:15 25:10,15
online 7:4,24 8:14
only 7:19 10:18 14:8 20:4,13 24:18
onto 25:24
open 13:13,14
opening 4:22
operation 3:9 12:20
opportunities 10:9 20:25
opportunity 5:1 20:9 20:10,13
options 18:16
order 16:6
ordnance 25:23
organizations 5:23
originally 9:11,14 22:23
other 8:2 9:19 11:6 13:4 15:20,21 16:7 17:5 20:4,13 21:6 22:16,21 25:12,25
others 13:8 16:4
out 3:6 6:14 8:8 13:10 17:12,14,15 18:4,14 19:18 20:16 21:18 22:7
outlined 9:21
outside 14:18
over 3:19 4:3 6:22 10:24 14:2 17:4,5 18:12 24:2 25:14,19 26:12,17
overnight 26:16,19
owned 9:14
owner 12:2
owns 10:1

P

P 2:2 3:1
parcel 12:8
parcels 12:9,10 14:14
park 11:10,12,13,14 11:15 13:14 21:20 21:21 22:6,18,21 23:9
part 3:8,14 5:2 9:16 11:14 14:8 25:7
partially 15:2
particular 16:24
partnership 26:6,13 26:17
parts 14:11
past 24:24
path 11:12
Peninsula 21:5
people 8:19 17:4 18:6 18:9 25:9
perform 12:3
performed 25:16
period 7:8,9 8:23 10:14 20:17,18,19 26:12,17,17
petroleum 11:1
phase 10:18
Phoebus 21:6
pink 14:4,11,24
place 13:13
places 15:13 25:25
plan 3:17 6:25 7:5,25 8:8 11:14 13:9 15:15 19:8,9,10,13,15 22:4 23:16,19,24 24:12 24:13,17
planning 13:19 15:13 22:10
please 3:3 6:11,16,19 13:25 14:13 18:9 25:8
plenty 3:4
podium 18:19
point 4:2,19 6:5 17:24 19:4,5,17 22:3 23:8 25:18
Policy 3:15 5:3
political 4:15
population 9:1
positions 9:3
possibilities 13:18
possible 12:23 24:18
post 9:4 24:14
posted 16:11
power 10:21
precisely 23:23
preferably 20:24
preference 11:20 13:7
prepare 3:20 16:12
prepared 4:13,20 5:5 6:18 7:1 16:15
presentation 4:10
presenting 6:23
President 5:21 8:16
pretty 4:20 10:11
primarily 11:3
prior 12:21
privately 17:20
probably 8:12 10:17 13:11 15:14 17:24
proceedings 26:21 27:6,12
process 4:6 5:2 11:6,8 12:17 15:19,23 16:23 17:18 18:19 19:4 24:2
products 11:1
Professional 1:23 27:4
project 6:8
properties 9:19 12:12
property 6:6 9:6,10,17 9:20,22,24,24 10:1,3 10:5 11:6,9,16,22,23 12:2,4,7 14:3,5,9
proposals 22:21
proposed 3:21 5:10,11 5:14 6:5 9:8 13:20
Protect 13:12
protected 10:19
provided 11:12
public 1:8 2:9 3:14 4:1 4:11 5:2,10,18 15:17 15:21,23 16:15 18:24 20:5,8,17,19 20:23 27:21
published 19:22 20:1
purchased 9:19
purple 14:16
purpose 3:13 4:25 6:12 15:25
put 7:16 8:8 17:15 18:11 20:11
putting 12:14 19:18
p.m 26:21

Q

Quality 13:2
quarter 3:9 15:1,5
question 7:8,8 20:3 21:2 22:7 23:11
questions 7:5,25 18:22 18:24 19:3
quite 7:20

R

R 3:1
raised 15:20
rally 4:15
range 13:18 23:11,12 23:17,19,23
read 13:11,12
ready 10:13
Real 11:5
really 3:16 8:9,9,13 14:8 18:2
reason 6:7 18:3
received 8:22 15:24
recite 13:11
recognize 7:20
recognizing 7:10
recommendation 5:22 12:22
recommendations 12:24
reconnaissance 11:11 21:22
record 18:1 25:3
recorded 27:5
recreation 15:3
reduce 10:10
reduced 21:11
refurbished 10:17
regarding 3:15 10:24
region 21:7,10
Register 15:12 16:12 20:2
Registered 1:23 27:4
Registration 27:22
regulations 12:5 13:2
Related 9:5
release 10:25
relevant 16:4
religious 4:16
relocate 5:23
remediation 12:7
reminds 18:11
report 8:8,14 21:21,25
reporter 4:12 17:8,21 18:13 24:9 27:5
Reporters 1:23
REPORTER'S 27:1
reposed 5:16
represented 7:6,17
request 11:8
requested 25:16
required 5:2 12:4,11 13:1 19:14 23:12,14 23:15,18
requirement 3:25 4:11 23:17
requirements 3:24
requires 5:4
resource 16:2 18:6 21:17
resources 16:5,6
respect 9:8
responsibilities 3:8,14
responsible 3:10 11:24 26:14
restoration 26:6
result 7:4,24
resulted 11:8
resulting 6:10
reuse 6:9,23,25 8:8 10:7,8,13,17 11:14 13:5,8,9,17 15:7,13 15:15 22:24
reused 13:7

review 8:7 20:17,18,19 20:22,24
revival 4:16
Reyes 2:2 3:2,5 4:8,22 5:1 6:13
Rich 2:5
Richard 4:3,7
right 5:16 13:12 14:2 14:20 20:14 21:1 22:9,22 23:4 24:12 24:19
roam 25:9
room 17:3 25:9
roving 17:3,20
RPR 27:20

S

S 3:1
Sam 2:10 22:14
same 8:3 26:3,4,9
saying 8:18
schedule 16:9
scheduled 16:16 20:15
scope 16:20 21:3
scoping 1:8 4:11 16:13 18:23
Scott 27:4,20
screening 11:8
script 4:10,17
seat 3:3
second 20:3
secondary 6:9 13:6
security 10:19
see 12:9 14:2 16:2,23 16:25 19:1 21:9 24:12 25:24 26:2,16
seeing 24:13
seek 13:14
seeking 10:8
send 17:16
sensitive 14:19
September 6:7 8:16 16:11 19:23,24,25
serve 19:7,9,17
serves 13:3 19:18
Service 11:10,12 21:20 21:21
set 12:1
several 11:20
share 3:13
sharing 3:16
sheet 17:18
shell 25:21,22
shells 26:8
shore 24:12,23
shoreline 10:2 25:24
shot 25:21
show 8:1
showing 6:15
shows 14:1
shy 24:8
side 18:6
signed 6:25,25 8:16
significant 9:5
similar 12:21
simply 5:8
site 14:25
sites 10:24
six 10:15 14:6
six-year 12:16
slide 6:11,15,16,19 14:13
slides 13:23
snapshot 8:22
some 4:14 7:25 13:10 16:3
something 18:12 23:21 26:18
soon 7:22
sorry 19:23 20:12 24:9
south 24:21
southwest 14:22
speak 14:10 18:20
Speakers 2:9
specialists 18:6
speech 4:15
speedily 12:11
spend 26:12
spills 11:4
stability 13:15
stage 5:16
stamp 17:15
standing 8:5 18:7
stands 23:17
start 8:19 10:22 24:1
started 9:11
state 9:17 10:2 12:4 14:2 20:19 26:14
statement 1:11 3:18 3:21 5:5,8 16:22 19:10,19 21:20 22:19 23:2,3
state-owned 9:24
status 10:16 12:15 15:10
stenotype 27:6
stick 4:10,17
still 9:25 10:3
stood 7:21
storage 11:4
strict 13:15
structures 15:12
studies 21:18
study 21:16 25:16
studying 22:25 23:5
stuff 24:25
subaqueous 14:6
submit 17:10 25:10
subsequent 11:11
substances 11:2
substantive 15:20
suggest 8:9
sum 26:11
supply 17:22
supposed 20:6
sure 19:12 23:25 25:3
survey 11:11 21:22
sway 5:18
switch 10:22

T

take 3:18 12:16 16:18 17:14,21,25
taken 5:13 15:2 17:7 18:24
taking 4:13
talk 18:9 25:9
talking 9:20 19:21 26:7
tanks 11:4
TAYLOE 1:22
Technology 6:1
Telephone 1:24
tell 8:11 18:13 25:10
tenant 5:23
tenants 9:17
tends 8:18
terms 24:16
thank 4:8,21,23,24 7:19 18:17 24:5 25:5 25:13
their 8:14 11:7 18:21 21:22
thing 8:3
things 21:16 23:25
think 3:3 7:2 16:10 19:6,21 21:24
third 9:22
thought 7:15
through 8:6 9:13 15:25
time 4:3 8:22,24,25 9:4 10:6,14,18 11:20 15:8 20:24 22:13 26:12,17,18
Tom 2:12 24:10
tonight 3:12 4:12,23 6:13 7:3,6,18 8:2,11 15:18 16:13 17:13 18:3 25:8
tonight's 4:25
Tony 3:5
top 14:20,23 20:20
torture 17:10
total 9:1
towards 20:24
track 25:20
tracked 25:22
traditional 11:18 12:6
TRADOC 5:25
traffic 16:5 21:18
transcript 27:10,11
transfer 11:23 12:2,6 12:13
transferred 10:6
true 23:3 27:11
trying 23:7,8 24:3
turn 4:3 10:12,22
two 6:22 7:17 8:1 11:16 17:4
type 9:22

U

uncontaminated 12:12
undecided 9:25
under 3:19 12:4,19 13:17 27:13
understand 23:10
unexploded 25:23
unfortunately 17:8
unlikely 10:5,8
unnecessary 12:13
until 18:14 22:3
upper 23:24
use 11:8,9
used 15:2 25:21
using 24:17

V

verbatim 17:8 27:5
very 8:13 14:19
village 14:21
Virginia 1:14,25 9:15 9:15 20:20 26:3,10 27:7,14
vital 13:13
volume 23:1

W

walk 17:20 18:12
wander 4:18
want 3:7,12,16 4:14 4:18 7:2 17:10,22 18:11,17 21:10,19 23:22,25 26:9,19
washed 24:25
water 10:20 14:7 25:17
waters 26:15
wave 17:3,4
way 17:21,22,25 18:15 21:8
ways 4:9 17:2 25:10
welcome 3:7 4:23 24:6
well 7:14 9:3 17:24 19:14 21:15
were 9:4 11:3 22:8
wetlands 14:6
we'll 7:3 17:23,23 21:13 25:3
we're 5:16 8:18 9:20 10:3 15:17 18:3,25 22:16,25 23:5 24:17 26:7
we've 16:23
Wherry 15:1,5
working 4:4 10:3,23
works 25:1
wouldn't 10:22
writing 17:11

Y

yeah 7:23
year 3:20 6:24 16:11
years 6:22 10:15 25:19
you-all 3:7

Z

zone 16:6 20:21

1

1,100 9:2
12th 16:19 17:1 20:11
15th 6:7
1610 9:12
18 25:14
19th 16:11 19:23,23 19:24,25

2

2,000 9:2
20th 6:24
2005 3:11 8:16
2008 1:13 27:8,14
2009 16:16 20:16
2011 6:7
215323 27:22
28 1:13
28th 16:13 27:7

3

3,100 9:2
30 20:20,20

4

4.1 14:7
4.2 14:7
45 20:22
45-day 20:16,19,24
461-1984 1:24

6

60-day 20:17

7

757 1:24

8

8:50 26:21
800 9:3

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

September 3, 2009

Subject: PUBLIC NOTICE OF AVAILABILITY
Draft Environmental Impact Statement for Disposal and Reuse of Fort Monroe, Virginia

Dear Recipient,

You are hereby notified of the availability of the Draft Environmental Impact Statement (DEIS) for the Disposal and Reuse of Fort Monroe, Virginia. The DEIS provides an evaluation of potential environmental and socioeconomic impacts of the disposal and reuse of Fort Monroe in accordance with the National Environmental Policy Act (NEPA) and implementing regulations issued by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] 1500–1508), the Army (32 CFR Part 651), and the Office of the Secretary of Defense (Base Redevelopment and Realignment Manual – Department of Defense 4165.66M). The Army's primary action is to dispose of surplus property as a result of the closure of Fort Monroe under the Base Realignment and Closure (BRAC) mandate. Reuse of Fort Monroe by others is a secondary action resulting from disposal.

The DEIS will undergo a 45-day public comment period beginning with publication of the Notice of Availability (NOA) on September 11, 2009. Interested parties are invited to review and comment on this DEIS during this time (comments must be received by October 26, 2009). During this 45-day comment period, the Army will be conducting a Public Meeting to which it invites the public, federally-recognized tribes, and federal, state, and local agencies to learn about, and comment on the DEIS. This meeting will be held at the Hampton Roads Convention Center 1610 Coliseum Dr., Hampton, VA 23666-4350 (757-315-1610) from 7 p.m. until 9 p.m. on Tuesday, October 6, 2009. The convention center is located adjacent to the Hampton Coliseum and directions are available on line at www.thehrcc.com. The meeting will be held as an open forum, during which Army representatives will make a brief presentation describing the NEPA process and the findings in the DEIS. Written comments will also be accepted during the meeting. Individuals may attend at their convenience during the above time period.

An electronic version of the DEIS is provided on the enclosed CD and the DEIS is also available on the Web at http://www.hqda.army.mil/acsimweb/brac/nepa_eis_docs.htm. Hard copies of the DEIS are also available at the following libraries:

Hampton Main Library	4207 Victoria Blvd. Hampton, VA 23669
Northhampton Branch Library	936 Big Bethel Road Hampton, VA 23669
Phoebus Branch Library	1 South Mallory Street Hampton, VA 23663
Willow Oaks Branch Library	227 Fox Hill Road Hampton, VA 23669
George Wythe Law Library	101 Kings Way, 2nd Floor Hampton, VA 23669

Questions and comments regarding this action must observe the October 26 deadline and should be addressed to: Ms. Robin Mills, Director, Directorate of Public Works, 318 Cornog Lane, Fort Monroe, VA 23651. Comments can also be sent to the following e-mail address: monr.post.nepapublic@us.army.mil. Thank you for your assistance.

Sincerely,

Robin D. Mills
Director, Public Works

Enclosure

DISTRIBUTION LIST

Federal Officials & Agencies

Senators
Honorable Mark Warner
459A Russell Senate Office Building
Washington, DC 20510

Honorable Jim Webb
248 Russell Senate Office Building
Washington, DC 20510

Representatives
Congressman Glenn Nye
2nd District of Virginia
116 Cannon House Office Building
Washington, DC 20515-4602

Congressman Bobby Scott
3rd District of Virginia
1201 Longworth House Office Building
Washington, DC 20515-4603

Federal Agencies
Ms. Karen DelGrosso
USEPA, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

U.S Department of the Interior
Fish and Wildlife Services
1849 C Street, NW
Washington, DC 20240

Ms. Karen Mayne / Ms. Kim Marbain
U.S. Fish and Wildlife Service
VA Field Office
Division of Ecological Services
6669 Short Lane
Gloucester, VA 23061

ACHP
1100 Pennsylvania Ave NW, Suite 809
Washington, DC 20004

U.S Department of Agriculture
1400 Independence Ave., SW
Washington, DC 20250

Mr. Robert Williams
USDA, NRCS
310 Shea Drive, Building 3
Chesapeake, VA 23320

Mr. David Cottingham, Director
NOAA
Ecology and Conservation District
14th and Constitution Avenue, NW
Washington, DC 20230

Rear Admiral Wayne Justice
Commander
United States Coast Guard
Atlantic Area, Fifth District
431 Crawford Street
Portsmouth, VA 23704

Mr. John Nichols
National Marine Fisheries Service
Habitat Conservation Division
904 South Morris Street
Oxford, MD 21654

Dennis R. Reidenbach
Regional Director, Northeast Region
National Park Service
c/o US Custom House, 5th Floor
200 Chestnut Street
Philadelphia, PA 19106

USGS
Water Resources Division
John W. Powell Federal Building
12201 Sunrise Valley Drive
Reston, VA 20192

State Officials & Agencies

Governor
Honorable Tim Kaine
Patrick Henry Building, 3rd Floor
1111 East Broad Street
Richmond, VA 23219

State Senators – Districts
Senator Harry Blevins
P.O. Box 16207
Chesapeake, VA 23328

Senator Mamie Locke
P.O. Box 9048
Hampton, VA 23670

Senator John Miller
P.O. Box 6113
Newport News, VA 23606

Senator Yvonne Miller
P.O. Box 452
Norfolk, VA 23501

Senator Thomas K. Norment, Jr.
P.O. Box 6205
Williamsburg, VA 23188

Senator Ralph S. Northam
P.O. Box 9363
Norfolk, VA 23505

Senator Kenneth W. Stolle
1065 Laskin Road, Suite 203
Virginia Beach, VA 23451

Senator Frank W. Wagner
P.O. Box 68008
Virginia Beach, VA 23471

Delegate Mamye E. BaCote
House of Delegates – 95th District
P. O. Box 5154
Newport News, VA 23605

Delegate Kenneth C. Alexander
House of Delegates - 89th District
7246 Granby Street
Norfolk, VA 23505

Delegate Joseph F. Bouchard
House of Delegates – 83rd District
P.O. Box 68726
Virginia Beach, VA 23471

Delegate Thomas D. Gear
House of Delegates – 91st District
P.O. Box 7496
Hampton, VA 23666

Delegate Phillip A. Hamilton
House of Delegates – 93rd District
P.O. Box 1585
Newport News, VA 23601

Delegate Algie T. Howell, Jr.
House of Delegates – 90th District
P.O. Box 12865
Norfolk, VA 23541

Delegate Salvatore R. Iaquinto
House of Delegates - 84th District
P.O. Box 6888
Virginia Beach, VA 23456

Delegate Johnny S. Joannou
House of Delegates - 79th District
709 Court Street
Portsmouth, VA 23704

Delegate Lynwood W. Lewis, Jr.
House of Delegates – 100th District
P.O. Box 760
Accomac, VA 23301

Delegate Paula J. Miller
House of Delegates – 87th District
P.O. Box 8757
Norfolk, VA 23503

Delegate G. Glenn Oder
House of Delegates – 94th District
P.O. Box 6161
Newport News, VA 23606

Delegate Brenda L. Pogge
House of Delegates – 96th District
P.O. Box 1386
Yorktown, VA 23692

Delegate Harry R. Purkey
House of Delegates – 82nd District
2352 Leeward Shore Drive
Virginia Beach, VA 23451

Delegate Robert Tata
House of Delegates – 85th District
4536 Gleneagle Drive
Virginia Beach, VA 23462

Delegate Jeion A. Ward
House of Delegates – 92nd District
P.O. Box 7310
Hampton, VA 23666

Delegate Robert W. Mathieson
House of Delegates – 21st District
P.O. Box 8021
Virginia Beach, VA 23450-8021

State Agencies

Ms. Ellie Irons
VDEQ, Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

Mr. John Paul Woodley, Jr.
Commonwealth of Virginia
Secretary of Natural Resources
799 9th Street Office Building
Richmond, VA 23219

Administrator
Council on the Environment
202 North 9th St., Suite 900
Richmond, VA 23219

Virginia Department of Conservation and Recreation
203 Governor Street, Suite 236
Richmond, VA 23219-2010

Virginia Department of Game and Inland Fisheries
Environmental Services Section
P.O. Box 11104
Richmond, VA 23230-1104

Mr. Tom Smith
VA Department of Conservation and Recreation
Natural Heritage Program
217 Governor Street, Suite 312
Richmond, VA 23219

Mr. Tom Fahrney
Virginia Department of Transportation
BRAC Coordinator
14685 Avion Parkway
Chantilly, Virginia 20151-1104

Mr. Dennis Heuer, Administrator
Virginia Department of Transportation
Hampton Roads District
1700 North Main Street
Suffolk, VA 23434

Ms. Sheri Kattan
Department of Water Quality
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach, VA 23462

Mr. Brian Moyer
4010 West Broad Street
P.O. Box 11104
Richmond, VA 23230-1104

Mr. Kotur S. Narasimhan
Air Data Analysis Program
629 East Main Street, 8th Floor
Richmond, VA 23219

Mr. Tom Modena
Waste Division
629 East Main Street, 4th Floor
Richmond, VA 23219

Ms. Ellen Gilinsky
Virginia Water Protection Program
629 East Main Street, 9th Floor
Richmond, VA 23219

Mr. Asif Malik
Virginia Department of Health
Water Programs
1500 East Main St., Room 109
Richmond, VA 23219

Virginia Department of Health
Bureau of Toxic Substances
PO Box 2448
Richmond, VA 23218

Ms. Kathleen Kilpatrick
State Historic Preservation Officer
Virginia DHR
2801 Kensington Ave.
Richmond, VA 23221

Mr. Thomas Barnard, Jr.
Virginia Institute of Marine Science
Gloucester Point, VA 23602

Mr. Frank Fulgham
Office of Plant & Pest Services
1100 Bank Street
Richmond, VA 23219

Ms. Susan Douglas
Division of Water Supply Engineering
1500 East Main Street, Room 109
Richmond, VA 23219

Mr. Eugene K. Rader
Division of Mineral Resources
PO Box 3667
Charlottesville, VA 22903

Mr. W. Douglas Beisch, Jr.
Chesapeake Bay Local Assistance Department
101 North 14th Street, 17th Floor
Richmond, VA 23219

Mr. Robert W. Grabb,
Assistant Commissioner
Virginia Marine Resources Commission
2600 Washington Avenue
Newport News, VA 23607

Mr. Arthur Collins
Executive Director
HRPDC
723 Woodlake Drive
Chesapeake, VA 23320

City of Hampton
Office of the City Manager
22 Lincoln Street
8th Floor, City Hall
Hampton, VA 23669

City of Hampton
Dept. of Planning
1 Franklin Street, Suite 603
Ruppert Sargent Building
Hampton, VA 23669

William A. Armbruster
Executive Director,
Fort Monroe FADA
Old Quarters #1
151 Bernard Road
Fort Monroe, VA 23651

City of Hampton
Department of Economic Development
1 Franklin Street, Suite 600
Ruppert Sargent Building
Hampton, VA 23669

Director
Newport News Wetlands Board
Department of Planning and Development
2400 Washington Avenue
Newport News, VA 23607

Mary Sherwood Holt
Chesapeake Bay Foundation
Lower Peninsula Chapter
7 River Road
Newport News, VA 23601

Interested Tribes and Tribes of Unknown Interest

Ms. Deanna Beacham
Program Specialist
Virginia Council on Indians
P.O. Box 1475
Richmond, VA 23218

The Honorable Gilbert Blue
Chairman
Catawba Indian Nation
996 Avenue of the Nations
Rock Hill, SC 29730

Dr. Wenonah G. Haire, Jr.
Tribal Historic Preservation Officer
Catawba Indian Nation
P.O. Box 750
Rock Hill, SC 29731

The Honorable Chadwick Smith
Principal Chief
Cherokee Nation
P.O. Box 948
Tahlequah, OK 74465

Dr. Richard Allen
Historic Preservation Program
Cherokee Nation
P.O. Box 948
Tahlequah, OK 74465

The Honorable Mitchell Hicks
Principal Chief
Eastern Band of Cherokee Indians
P.O. Box 455
Cherokee, NC 28719

Ms. Lisa Stopp
Acting Tribal Historic Preservation Officer
United Keetoowah Band of Cherokee Indians
P.O. Box 746
Tahlequah, OK 74465

The Honorable George Wickliffe
Chief
United Keetoowah Band of Cherokee Indians
P.O. Box 746
Tahlequah, OK 74465

The Honorable Ron Sparkman
Chairman, Shawnee Tribe
P.O. Box 189
Miami, OK 74355

Rebecca Hawkins
Tribal Historic Preservation Officer
Shawnee Tribe
P.O. Box 189
Miami, OK 74355

The Honorable Larry Nuckolls
Governor
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee, OK 74801

The Honorable Charles D. Enyart
Chief, Eastern Shawnee Tribe of Oklahoma
P.O. Box 350
Seneca, MO 64865

Ms. Robin Dushane
Preservation Services
Eastern Shawnee Tribe of Oklahoma
P.O. Box 350
Seneca, MO 64865

The Honorable Leo R. Henry
Chief
Tuscarora Nation
2006 Mt. Hope Road
Lewiston, NY 14092

Mr. Neil Patterson, Jr.
Director
Tuscarora Environmental Program
Tuscarora Nation of New York
2045 Upper Mountain Road
Sanborn, NY 14132

Rappahannock Tribe
HCR 1, Box 7
Indian Neck, VA 23148

Mattaponi Indian Reservation
1467 Mattaponi Reservation Circle
West Point, VA 23181

The Chickahominy Tribe
8200 Lott Cary Road
Providence Forge, VA 23140

Upper Mattaponi Tribe
Chief Edmund S. Adams
7412 Adams Farm Road
Mechanicsville, VA 23111

Eastern Chickahominy Tribe
Marvin Bradby
12111 Indian Hill Lane
Providence Forge, VA 23140

Pamunkey Tribe
Chief William P. Miles
Route 1, Box 2220
King William, VA 23086

Local Government Officials & Agencies

Local Government

Mayor Molly Joseph Ward
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Vice Mayor Joseph H. Spencer, II
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Councilman Randy Gilliland
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Councilman Ross A Kearney, II
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Councilwoman Angela Lee Leary
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Councilman George E. Wallace
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

Councilman Paige Washington, Jr.
8th Floor, Hampton City Hall
22 Lincoln Street
Hampton, VA 23669

James A. Young, Chairman
13 Wexford Hill Road
Hampton, VA 23666

Ralph A. Heath, III, Vice-Chairman
38 Northampton Drive
Hampton, VA 23666

Andre McCloud, Commissioner
2302 LaGuard Drive
Hampton, VA 23661

Timothy B. Smith, Commissioner
148 Meredith Avenue
Hampton, VA 23669

Amy Thorstad, Commissioner
1 Overlook Court
Hampton, VA 23666

George E. Wallace
Council Member/Commissioner
3 Colonnade Court
Hampton, VA 23666

Jesse Wallace
City Manager/Commissioner
22 Lincoln Street
Hampton, VA 23669

Terry P. O'Neill
Director of Planning/Secretary to Commission
Planning Department
1 Franklin Street, Suite 603
Hampton, VA 23669

Historic Preservation Advisory Group

Robert Nieweg, Director
Southern Field Office
National Trust for Historic Preservation
1785 Massachusetts Avenue, NW
Washington, DC 20036-2117

Mary Means, President
Mary Means and Associates
108 South Fayette Street
Alexandria, VA 22314

Eleanor Krause, Principal
RKTects, Inc.
1010 King Street, Suite #3
Alexandria, VA 22314

Dr. Laurenett Lee, Curator
African American History
Virginia Historical Society
P.O. Box 7311
Richmond, VA 23221-0311

Jeanne Zeidler, Director
Jamestown 2007
Municipal Building,
401 Lafayette Street
Williamsburg, VA 23185-3617

Alisa Bailey, President
Virginia Tourism Corporation
901 East Byrd Street
Richmond, VA 23219

Dorothy Redford, Executive Director
Somerset Plantation State Historic Site, NC
2572 Lake Shore Road
Creswell, NC 27928

INVOICE

Tayloe Associates, Inc.
P O Box 3475
Norfolk, VA 23514-3475
Phone:757-461-1984 Fax:757-461-5454

Invoice No.	Invoice Date	Job No.
21380	10/14/2009	16772
Job Date	**Case No.**	
10/6/2009	--	
Case Name		
Fort Monroe Scoping Meeting		
Payment Terms		
Net 30		

Rich Muller
Rich Muller
Marstel-Day
238 N First Street
Hampton, VA 23664

Original of Transcript		
Fort Monroe Scoping Meeting		229.25
Reporting Fee	75.00	75.00
Reporting Fee	30.00	30.00
UPS Delivery		
	TOTAL DUE >>>	**$334.25**

UPS 10/14/09

Thank you for using Tayloe Associates!

WE NOW HAVE TWO HD VIDEOCONFERENCING SUITES!
PLEASE CALL FOR INFORMATION

Tax ID: 54-1436256 Phone: Fax:

Please detach bottom portion and return with payment.

Rich Muller
Rich Muller
Marstel-Day
238 N First Street
Hampton, VA 23664

Job No. : 16772 BU ID : NORF-MAIN
Case No. : --
Case Name : Fort Monroe Scoping Meeting

Invoice No. : 21380 Invoice Date : 10/14/2009
Total Due : $ 334.25

PAYMENT WITH CREDIT CARD AMEX MasterCard VISA

Cardholder's Name: _____
Card Number: _____
Exp. Date: _____ Phone#: _____
Billing Address: _____
Zip: _____ Card Security Code: _____
Amount to Charge: _____
Cardholder's Signature:

Remit To: **Tayloe Associates, Inc.**
P O Box 3475
Norfolk, VA 23514-3475

October 6, 2009

FACT SHEET

Fort Monroe Disposal and Reuse
National Environmental Policy Act (NEPA)
Draft Environmental Impact Statement (DEIS)
& Public Participation Process

PURPOSE OF DEIS PUBLIC MEETING

- To inform the public of NEPA and Army Regulations for implementing NEPA.
- To request public input pertaining to the DEIS describing closure and reuse of Fort Monroe, and potential effects of these actions on the natural and human environment.
- To provide a schedule for future actions, including preparation of a Final Environmental Impact Statement (EIS) and Record of Decision (ROD).

THE EIS PROCESS

- Federal agencies are required to conduct NEPA environmental analysis for major Federal actions that have the potential to affect the environment.
- The Army's proposed action is to dispose of surplus federal property generated by closure of Fort Monroe.
- The Army initiated preparation of an Environmental Assessment (EA) for this action in 2007.
- Based on the Final Reuse Plan approved in August 2008 by Governor Kaine, the Army determined that Base Realignment and Closure (BRAC) actions at Fort Monroe have the potential to cause significant environmental impacts; therefore, the Army decided to prepare an EIS in lieu of an EA.
- The DEIS addresses environmental and socioeconomic impacts, focusing on concerns raised by the public and federal, state, and local government agencies.
- Public involvement is a key component of the EIS process.
- All substantive comments received during the public participation process were addressed in the DEIS.
- The DEIS addresses substantive comments received during the 2007 EA and 2008 EIS scoping process, including those submitted by the City of Hampton and the Fort Monroe Federal Area Development Authority (FMFADA), which the Department of Defense has recognized as the Local Redevelopment Authority.
- The Final EIS will consider all public comments received, and provide responses to substantive comments.

For additional information contact Fort Monroe Directorate of Public Works at monr.dpw@monroe.army.mil Telephone number 757-788-5363 or 5947

- This process will further aid Army decision makers in determining implementation methods of closure and property transfer.

FOCUS OF THE DEIS

Primary environmental issues that were evaluated in detail in the DEIS include:

- Land Use
- Aesthetics and Visual Resources
- Air Quality
- Noise
- Geology and Soils
- Water Resources
- Biologic al Resources
- Cultural Resources
- Socioec onomics
- Transportation
- Utilities
- Hazardous and Toxic Substances
- Cumulative Effects
- Mitigation

FORT MONROE EIS SCHEDULE

- Notice of Intent to prepare an EIS published in the Federal Register on September 19, 2008
- Public Scoping Meeting held on October 28, 2008
- Public comments on the scope of the EIS were received until November 12, 2008
- Notice of Availability of the DEIS was published on September 11, 2009, which is followed by a 45-day public review period
- Public Meeting for the DEIS held on October 6, 2009
- Notice of Availability of Final EIS to be published February 16, 2010*
- ROD to be signed April 7, 2010*, followed by a 30-day waiting period before action can begin.

  ** schedule subject to change*

PUBLIC REVIEW and COMMENT PROCESS

The public and interested or affected parties are invited to comment on the Fort Monroe DEIS. Comment forms are provided at this public meeting for your use. **Public comments on the DEIS must be received by October 26, 2009.** Responses to public comments will be included in the Final EIS.

There are four ways to comment:

1) Drop your completed comments form in the comments box during this DEIS Public Meeting;
2) Provide verbal comments to a court reporter during this DEIS Public Meeting;
3) Mail the comment form to the Fort Monroe address provided on the form; or
4) E-mail your comments to monr.post.nepapublic@us.army.mil

AGENDA

Public Meeting

Draft Environmental Impact Statement (DEIS)
BRAC 2005 Disposal and Reuse of Fort Monroe, Virginia

Tuesday, October 6, 2009
7:00 PM – 9:00 PM

Hampton Roads Convention Center, Hampton, Virginia

I

7:00 PM
Doors opened.

Visitors are greeted and requested to sign-in, and are invited to review the displays, which summarize the findings of the environmental analysis of the effects of closing Fort Monroe.

II

7:45 PM

Welcome by COL Anthony D. Reyes, Garrison Commander, Fort Monroe

followed by

Mr. Richard Muller presenting a brief overview of findings of the DEIS.

III

8:00 PM to Closing

Guests are invited to present their comments verbally, or by submitting their prepared written comments.
Forms are also provided for comments.
These forms may be completed and submitted at the meeting or mailed as directed when finished.
Mailed and electronic submittals must be received by October 26, 2009.

IV

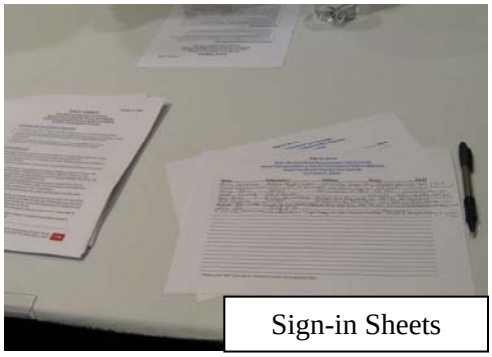
After all verbal comments are received from the audience and until closing, guests may continue to view the displays and interact with resource area specialists.

Sign-in Table

Fort Monroe Draft Environmental Impact Statement Public Meeting
Tuesday, October 6, 2009
Hampton Roads Convention Center
1610 Coliseum Dr., Hampton, VA
7:00 – 9:00 pm

Sign-in

Court Reporter



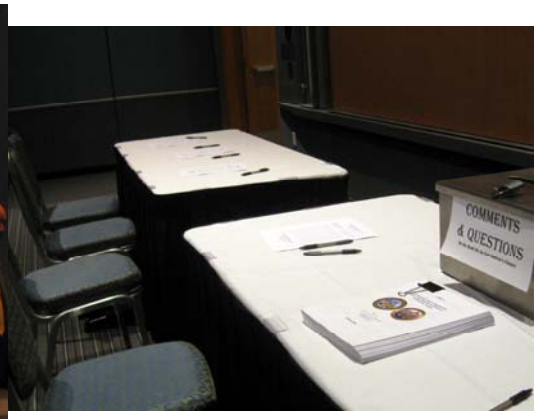
Sign-in Sheets

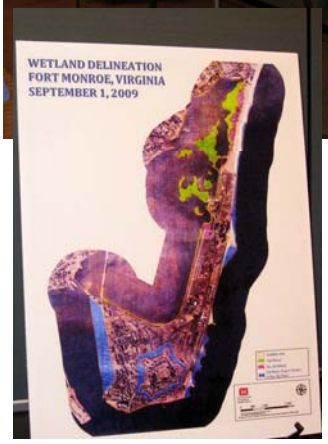
Meeting Room Layout

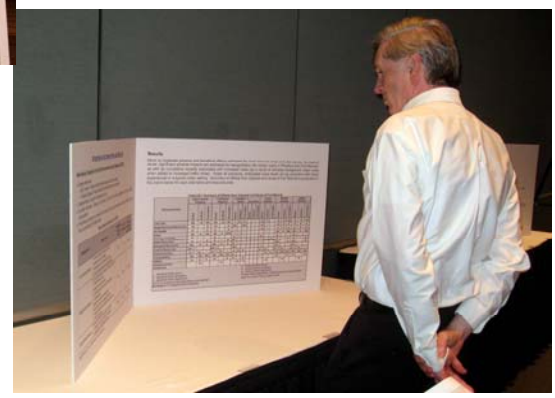
Meeting in Progress

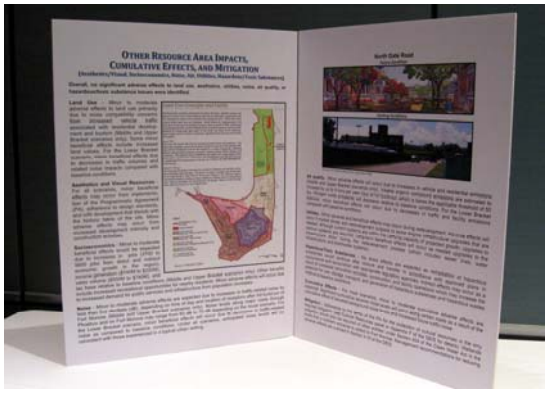
Public Comments

Public Comments









Storyboards at Public Meeting

EIS No. 20090282, ERP No. F–FRC–D05126–VA, Smith Mountain Pumped Storage Project (FERC No. 2210–169). Application for Hydropower License to continue Operating the 636-megawatt Pumped Storage Project, Roanoke River, Smith Mountain Pumped Storage Project (FERC No. 2210–169). Application for Hydropower License to continue Operating the 636-megawatt Pumped Storage Project, Roanoke River, Bedford, Campbell, Franklin, and Pittsylvania Counties, VA

Summary: EPA expressed environmental concerns about water temperature, aquatic life and wetland impacts. EPA requested additional information on avoidance, minimization, and mitigation measures for the above impacts.

EIS No. 20090293, ERP No. F–NPS–D61062–PA, White-Tailed Deer Management Plan, Development of a Deer Management Strategy that Supports Protection, Preservation, and Restoration of Native Vegetation, Implementation, Valley Forge National Historical Park, Chester and Montgomery Counties, PA

Summary: EPA does not object to the proposed project.

EIS No. 20090261, ERP No. FS–GSA–D81027–MD, U.S. Food and Drug Administration (FDA) Headquarters Consolidation, Master Plan Update, Federal Research Center at White Oak, Silver Spring, Montgomery County, MD

Summary: EPA's previous concerns have been resolved; therefore, EPA does not object to the proposed action.

Dated: September 8, 2009.

Kenneth Mittelholtz,

Deputy Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. E9–21943 Filed 9–10–09; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–8597–2]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–1399 or *http://www.epa.gov/compliance/nepa/*

Weekly receipt of Environmental Impact Statements

Filed 08/31/2009 Through 09/04/2009

Pursuant to 40 CFR 1506.9

EIS No. 20090310, Draft Supplement, AFS, ID, Small-Scale Suction Dredging in Lolo Creek and Moose Creek Project, Updated Information to Analysis Three Alternatives, Clearwater National Forest, North Fork Ranger District, Clearwater and Idaho Counties, ID, *Comment Period Ends:* 10/26/2009, *Contact:* Doug Gober 208–476–4541

EIS No. 20090311, Final EIS, USN, WA, Naval Base Kitsap—Bangor, Construct and Operate a Swimmer Interdiction Security System (SISS), Silverdale Kitsap County, WA, *Wait Period Ends:* 10/13/2009, *Contact:* Shannon Kasa 619–53–3889

EIS No. 20090312, Draft EIS, COE, OH, Cleveland Harbor Dredged Material Management Plan, Operations and Maintenance, Cuyahoga County, OH, *Comment Period Ends:* 10/26/2009, *Contact:* Frank O'Connor 716–879–4131

EIS No. 20090313, Draft EIS, AFS, CA, Freds Fire Reforestation Project, Implementation, EL Dorado National Forest, Placerville and Pacific Ranger Districts, El Dorado County, CA, *Comment Period Ends:* 10/26/2009, *Contact:* Robert Carroll 530–647–5386

EIS No. 20090314, Draft EIS, FHW, IL, TIER 1—Elgin O'Hare—West Bypass Study, To Identify Multimodal Transportation Solutions, Cook and DuPage Counties, IL, *Comment Period Ends:* 10/26/2009, *Contact:* Matt Fuller 217–492–4625

EIS No. 20090315, Draft EIS, FTA, CA, Crenshaw Transit Corridor Project, Proposes to Improve Transit Services, Funding, Los Angeles County Metropolitan Transportation Authority (LACMTA), Los Angeles County, CA, *Comment Period Ends:* 10/26/2009, *Contact:* Roderick Diaz 213–922–3018

EIS No. 20090316, Final EIS, FTA, 00, PROGRAMMATIC—Streamlining the Processing of Experimental Permit Applications, Issuing Experimental Permits for the Launch and Reentry of Useable Suborbital Rockets, *Wait Period Ends:* 10/13/2009, *Contact:* Daniel Czelusniak 202–267–5924

EIS No. 20090317, Draft EIS, USA, VA, Fort Monroe US Army Garrison Base Realignment and Closure (BRAC) 2005 Disposal and Reuse of Surplus Nonreverting Property, Fort Monroe, VA, *Comment Period Ends:* 10/26/2009, *Contact:* Bob Ross 703–602–2878

EIS No. 20090318, Draft EIS, USA, WA, Fort Lewis Army Growth and Force Structures Realignment, Implementation, Fort Monroe and Yakima Training Center, Kittitas, Pierce, Thurston and Yakima Counties, WA, *Comment Period Ends:* 10/26/2009, *Contact:* B. Van Hoesen 253–966–1780

EIS No. 20090319, Final EIS, USA, AK, U.S. Army Alaska (USARAK) Project, Proposes the Stationing and Training of Increased Aviation Assets, Fort Wainwright, Fairbank, AK, *Wait Period Ends:* 10/13/2009, *Contact:* Jennifer Shore 703–602–4238

Amended Notices

EIS No. 20090304, Final EIS, AFS, 00, Inyo National Forest Motorized Travel Management Project, Implementation, Inyo, Mono, Fresno, Madera and Tulare Counties, CA and Mineral and Esmeralda Counties, NV, *Wait Period Ends:* 10/05/2009, *Contact:* Susan Joyce 760–873–2516

Revision to FR Notice Published 09/04/2009: Correction to Counties and States

EIS No. 20090309, Final EIS, FTA, MO, East Corridor Project, Proposes Commuter Rail Transit from downtown Denver to International Airport (DIA), Denver, Adams, Arapahoe, Jefferson and Douglas Counties, CO, *Wait Period Ends:* 10/05/2009, *Contact:* David Beckhouse 720–963–3306

Revision to FR Notice Published 09/04/2009: Correction to Title and Federal Agency.

Dated: September 8, 2009.

Ken Mittelholtz,

Deputy Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. E9–21944 Filed 9–10–09; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–8956–1]

Notice of a Project Waiver of Section 1605 (Buy American Requirement) of the American Recovery and Reinvestment Act of 2009 (ARRA) to the Kennebec Water District in Waterville, ME

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The EPA is hereby granting a project waiver of the Buy American requirements of ARRA Section 1605 under the authority of Section 1605(b)(2) [manufactured goods are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality] to the Kennebec Water District (KWD) (also known as the ''Water District'') in Waterville, Maine for the purchase of

stationing of approximately 1,000 combat service support (CSS) Soldiers consisting of quartermaster, medical, transportation, headquarters or other CSS units to support combat operations, and the potential stationing of a medium Combat Aviation Brigade (CAB) consisting of approximately 2,800 soldiers and 110 helicopters.

DATES: The public comment period for the DEIS will end 45 days after publication of an NOA in the **Federal Register** by the Environmental Protection Agency.

ADDRESSES: Questions or comments regarding the DEIS should be forwarded to: Department of the Army, Directorate of Public Works, Attention: IMWE–LEW–PWE (Mr. Paul T. Steucke, Jr.), Building 2012, Liggett Avenue, Box 339500 MS 17, Fort Lewis, WA 98433–9500.

FOR FURTHER INFORMATION CONTACT: Mr. Bill Van Hoesen, Fort Lewis National Environmental Policy Act (NEPA) Coordinator, at (253) 966–1780 during business hours (8 a.m. to 4 p.m. PDT, Monday through Friday).

SUPPLEMENTARY INFORMATION: Fort Lewis is an 86,176 acre major Army installation in western Washington (approximately 35 miles south of Seattle) and is one of 15 U.S. power projection platforms. The 327,231 acre YTC is a subinstallation of Fort Lewis located about 7 miles northeast of the City of Yakima in central Washington. Fort Lewis and YTC are important Army facilities for weapons qualification and field training. In addition to the units stationed there, Reserve and National Guard units, as well as units from allied nations, train at Fort Lewis and YTC.

The DEIS evaluates the potential impacts of the site-specific actions for the alternatives to implement the Proposed Action. These actions include troop stationing, maneuver and live-fire training, and construction. The following alternatives are evaluated:

(1) The No Action alternative assumes that the Army GTA decisions would not be implemented. It is not a viable alternative because the Army GTA decisions have already been made, and the decisions need to be implemented. Analysis of the No Action alternative serves as a baseline for comparison of the other alternatives. Under this alternative, planned construction that is not part of the GTA decisions includes troop barracks, recreational facilities, traffic flow improvements and other infrastructure upgrades at Fort Lewis.

(2) The GTA alternative implements the Army GTA decisions affecting Fort Lewis and YTC. Maneuver and live-fire training of an additional 1,900 Soldiers will occur at Fort Lewis and YTC. This alternative also includes the training of three Stryker Brigade Combat Teams (SBCT5) present simultaneously at Fort Lewis and YTC. Planned new construction includes brigade barracks complexes, the upgrade of sub-standard SBCT facilities to meet Army standards, and additional firing ranges at Fort Lewis and YTC.

(3) The CSS alternative represents the potential stationing at Fort Lewis of up to 1,000 CSS Soldiers in addition to Alternative 2. Maneuver and live-fire training of up to 2,900 new Soldiers would occur at Fort Lewis and YTC. Specific construction projects cannot be identified until the types and numbers of CSS units are known, but new construction would include barracks, motor pools, classrooms and administrative facilities.

(4) The CAB alternative represents the potential stationing at Fort Lewis of a medium CAB in addition to Alternative 3. Maneuver and live-fire training of up include the air and ground assets of the CAB. New construction facilities to support the CAB would be similar to those required for Alternative 3.

Major impacts expected from implementing the Proposed Action include noise from the increased frequency of demolitions and live-fire training, which would extend further beyond the boundaries of Fort Lewis into the surrounding communities. Additional traffic volume from the potential stationing of the medium CAB would increase the delays and congestion at key intersections during peak traffic hours. Although the additional number of schoolchildren from each alternative would increase the number of schoolchildren in the local school systems, the potential CAB stationing would significantly impact the local school systems that support Fort Lewis. At YTC, increased use of training lands and firing ranges for maneuver and live-fire training would increase the risk of damage to wildlife and wildlife habitat.

A copy of the DEIS may be accessed at the following Web site: *http://www.lewis.army.mil/publicworks/sites/envir/EIA_2.htm.* Comments from the public will be considered before any decision is made regarding implementation of the Proposed Action.

Dated: September 2, 2009.

Addison D. Davis, IV,

Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health).

[FR Doc. E9–21932 Filed 9–11–09; 8:45 am]

BILLING CODE 3710–08–M

DEPARTMENT OF DEFENSE

Department of the Army

Draft Environmental Impact Statement (DEIS) for the Base Realignment and Closure (BRAC) 05 Actions at Fort Monroe, VA

AGENCY: Department of the Army, DoD.

ACTION: Notice of Availability (NOA).

SUMMARY: The Department of the Army announces the availability of the DEIS, which evaluates the potential environmental and socioeconomic impacts of BRAC actions at Fort Monroe, Virginia.

DATES: The public comment period for the DEIS will end 45 days after publication of an NOA in the **Federal Register** by the U.S. Environmental Protection Agency. Public meeting date is: October 6, 2009, 7 p.m. to 9 p.m., Hampton Roads Convention Center, 1610 Coliseum Drive, Hampton, VA.

ADDRESSES: Please send written comments on the DEIS to: Ms. Robin Mills, Chief, Directorate of Public Works, 318 Cornog Lane, Fort Monroe, VA 23651. E-mail comments should be sent to *monr.post.nepapublic@us.army.mil.*

FOR FURTHER INFORMATION CONTACT: Ms. Robin Mills, Chief, Directorate of Public Works, 318 Cornog Lane, Fort Monroe, VA 23651. E-mail comments should be sent to *monr.post.nepapublic@us.army.mil.*

SUPPLEMENTARY INFORMATION: The DEIS covers activities associated with the BRAC actions at Fort Monroe, Virginia. The 2005 BRAC Commission recommended the closure of Fort Monroe and the relocation of the U.S. Army Training and Doctrine Command (TRADOC) Headquarters; the Installation Management Agency (IMA) Northeast Region Headquarters; the U.S. Army Network Enterprise Technology Command (NETCOM) Northeast Region Headquarters; and the Army Contracting Agency Northern Region Office to Fort Eustis, VA. The 2005 BRAC Commission also recommended the U.S. Army Accessions Command and U.S. Army Cadet Command relocate to Fort Knox, KY. Under BRAC, closure will be no later than September 15, 2011.

Following closure, Fort Monroe will be surplus to Army needs and the Army will dispose of its real property interests. The Army has recognized the Fort Monroe Federal Area Development Authority (FMFADA) as the local reuse authority for reuse planning. The FMFADA Fort Monroe Reuse Plan was approved by the Governor in August

2008 and is available at: *http://www.fmfada.com/business/reuse_planning/.*

Fort Monroe is a 570-acre U.S. Army Garrison located on Old Point Comfort at the southeastern tip of the Virginia Lower Peninsula between Hampton Roads and the Lower Chesapeake Bay. The Fort Monroe property is still almost completely surrounded by the waters of the lower Chesapeake Bay, the harbor of Hampton Roads, and Mill Creek. The installation's northern extension ties into land in the city of Hampton and the community of Buckroe Beach.

The primary Army action is to dispose of the surplus Federal property generated by the BRAC-mandated closure of Fort Monroe. Reuse of Federal property at Fort Monroe by others is a secondary action resulting from disposal. The Army identified two disposal alternatives (early transfer and traditional disposal), a caretaker status alternative and the no action alternative. The reuse scenarios encompass the FMFADA's Reuse Plan and include higher and lower levels of development intensities. The Army expresses no preference with respect to reuse scenarios. The EIS analyzes each alternative's impact upon the natural and cultural environments in the surrounding vicinity.

Four alternatives are analyzed in the DEIS: (1) An early transfer alternative, under which transfer and reuse of the property would occur before environmental remedial action has been completed; (2) a traditional disposal alternative, under which transfer and reuse of the property would occur once environmental remediation is complete for individual parcels of the installation; (3) a caretaker status alternative, which would arise in the event that the Army is unable to dispose of all or portions of the property within the period of time defined for initial caretaking, after which time the maintenance of the property would be reduced to minimal activities necessary to ensure security, health, and safety, and to avoid physical deterioration of facilities; and (4) a no action alternative, under which the Army would continue operations at Fort Monroe at levels similar to those occurring prior to the BRAC Commission's recommendation for closure. Three reuse scenarios (based on low, middle, and upper bracket intensity scenarios of reuse) are evaluated as secondary actions of disposal of Fort Monroe. These reuse scenarios bracket the intensity of reuse expected under the FMFADA's reuse plan.

The evaluated resource areas include land use, aesthetics and visual resources, air quality, noise, geology and soils, water resources, biological resources, cultural resources, socioeconomics, transportation, utilities, and hazardous and toxic substances. Direct and indirect impacts of each disposal alternative on the resource areas include a variety of short- and long-term impacts, both adverse and beneficial. Under the early transfer and traditional disposal alternatives, minor to significant adverse effects would be expected in the areas of noise and transportation. For the caretaker status alternative, minor adverse effects would be expected to occur for all resources areas with the exception of minor beneficial effects estimated for air quality and noise. The no action alternative would result in no new adverse direct, indirect, or cumulative impacts. The three reuse scenarios evaluated have the potential for a variety of adverse and beneficial short- and long-term effects.

The Army invites the public, local governments, and state and Federal agencies to submit written comments or suggestions concerning the alternatives and analyses addressed in the DEIS. The public and government agencies also are invited to participate in a public meeting where oral and written comments and suggestions will be received. Copies of the DEIS will be available for review at Hampton, VA, libraries prior to the public meeting. The DEIS may also be viewed online at: *http://www.hqda.army.mil/acsimweb/brac/nepa_eis_docs.htm.*

Dated: September 2, 2009.

Addison D. Davis, IV,

Deputy Assistant Secretary of the Army (Environment, Safety, and Occupational Health).

[FR Doc. E9–21931 Filed 9–11–09; 8:45 am]

BILLING CODE 3710–08–M

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Availability of Government-Owned Inventions; Available for Licensing

AGENCY: Department of the Navy, DOD.

ACTION: Notice.

SUMMARY: The invention listed below is assigned to the United States Government as represented by the Secretary of the Navy and is available for licensing by the Department of the Navy. U.S. Patent Application Number 12/460,172 filed on July 9, 2009, Navy Case Number PAX 30 entitled ''Human Behavioral Simulator for Cognitive Decision-Making.''

ADDRESSES: Requests for data and inventor interviews should be directed to Mrs. Asuncion L. Simmonds, Naval Air Warfare Center Training Systems Division, Code 4.6T, 12350 Research Parkway, Orlando, FL 32826–3275 or e-mail *asuncion.simmonds@navy.mil.*

DATES: Request for data, samples, and inventor interviews should be made prior to October 24, 2009.

FOR FUTHER INFORMATION CONTACT: Mrs. Asuncion L. Simmonds, Naval Air Warfare Center Training Systems Division, Code 4.6T, 12350 Research Parkway, Orlando, FL. 32826–3275, 407–380–4699 or e-mail *asuncion.simmonds@navy.mil.*

SUPPLEMENTARY INFORMATION: The U.S. Navy intends to move expeditiously to license these inventions. All licensing application packages and commercialization plans must be returned to Commanding Officer, Naval Air Warfare Center Training Systems Division, Attn: Asuncion Simmonds, Code 4.6T, 12350 Research Parkway, Orlando, FL 32826–3275, or e-mail *asuncion.simmonds@navy.mil.*

The Navy, in its decisions concerning the granting of licenses, will give special consideration to existing licensees, small business firms, and consortia involving small business firms. The Navy intends to ensure that its licensed inventions are broadly commercialized throughout the United States.

PCT application may be filed for the patent as noted above. The Navy intends that licensees interested in a license in territories outside of the United States will assume foreign prosecution and pay the cost of such prosecution.

Authority: 35 U.S.C. 207, 37 CFR Part 404.

Dated: September 4, 2009.

T.M. Cruz,

Lieutenant Commander, Judge Advocate General's Corps, U.S. Navy, Alternate Federal Register Liaison Officer.

[FR Doc. E9–21990 Filed 9–11–09; 8:45 am]

BILLING CODE 3810–FF–P

EIS for BRAC 2005 Disposal and Reuse of Fort Monroe, Virginia

Public Meeting Summary Report

Prepared for

U.S. Army Corps of Engineers
Mobile District

Prepared by

Marstel-Day, LLC
Fredericksburg, VA

20 October 2009

Contents

SECTIONS **PAGE**

1.0 Introduction……1

2.0 Notification of Public Meeting……1

3.0 Public Meeting……..2

4.0 Public Comments……3

APPENDICES

Appendix A. Prepared Text of Speech

Appendix B. Location and Layout of the Public Meeting

Appendix C. Public Meeting Sign-In Sheets

Appendix D. Written Public Comments Received at Meeting

Appendix E. Transcript of the Public Meeting

1.0 Introduction

This document summarizes the notification and issues, concerns, and questions raised at the Fort Monroe Draft Environmental Impact Statement (DEIS) Public Meeting conducted 6 October 2006 following the release for public review and comment of the Fort Monroe Base Realignment and Closure (BRAC) 2005 DEIS.

2.0 Notification of Public Meeting

Legal advertisements were published in the two largest circulation newspapers in the regional vicinity of Fort Monroe. The advertisements appeared as follows in the Virginian-Pilot and in the Daily Press on the September 11, 2009.

FORT MONROE PUBLIC NOTICE OF PUBLIC MEETING

Department of the Army Invites Public Input for the Draft Environmental Impact Statement (DEIS) of the Fort Monroe Base Realignment and Closure (BRAC) Action

When: 7:00 p.m.-9:00 p.m. on October 6, 2009

Where: Hampton Roads Convention Center, 1610 Coliseum Dr., Hampton, VA 23666-4350

The Army announces the availability of the Draft Environmental Impact Statement (DEIS) analyzing the potential impacts of Base Realignment and Closure (BRAC) activities at Fort Monroe, Virginia. In compliance with the National Environmental Policy Act, the Department of the Army, Fort Monroe will conduct a Public Meeting on October 6, 2009, at the location and time listed above. The purpose of this meeting is to solicit public comments concerning the alternatives and analyses addressed in the DEIS. Federal, state, and local agencies, federally recognized tribes, individuals, and organizations that have an interest are urged to participate. The meeting will be held as an open forum, during which Army representatives will make a brief presentation describing the NEPA process and the findings in the DEIS. Written comments will also be accepted during the meeting. Members of the public may attend at their convenience during the above time period.

The Army also invites federal, state, and local agencies, federally recognized tribes, individuals, and organizations to submit written comments on or before the 45-day

public comment period closes on October 26, 2009. Copies of the DEIS are available for review at the local libraries listed below.

Hampton Main Library, 4207 Victoria Blvd. Hampton, VA 23669

Northhampton Branch Library, 936 Big Bethel Road Hampton, VA 23669

Phoebus Branch Library, 1 South Mallory Street Hampton, VA 23663

Willow Oaks Branch Library, 227 Fox Hill Road Hampton, VA 23669

George Wythe Law Library, 101 Kings Way, 2nd Floor Hampton, VA 23669

The DEIS may also be viewed online at: http://www.hqda.army.mil/acsimweb/brac/nepa_eis_docs.htm

Written comments on the DEIS should be sent to: Ms. Robin Mills, Director, Directorate of Public Works, 318 Cornog Lane, Fort Monroe, VA 23651. E-mail comments should be sent to monr.post.nepapublic@us.army.mil on or before the October 26, 2009 deadline.

A separate letter of invitation to the Public Meeting with CD copies of the Fort Monroe DEIS was sent to approximately 100 addresses by Marstel-Day, LLC. Invitees included federal, state and local agencies and officials, Native American tribes, and other potentially interested parties. The Notice of Availability (NOA) for the DEIS was announced in the Federal Register by the Environmental Protection Agency on September 11, 2009. The full text of the NOA for the DEIS was published in the Federal Register by the U.S. Army on the following business day, September 14, 2009.

3.0 Public Meeting

The Fort Monroe Public Meeting was held, as announced, on 6 October 2009 from 7:00 PM to 9:00 PM in Ballroom E of the Hampton Roads Convention Center, 1610 Coliseum Drive, Hampton, VA 23666 (Appendix A). The room was available to the public prior to the published starting time and was not closed until after 9:00, when all guests had departed.

Mr. Bob Edwards, Fort Monroe's Chief of Resource Management, presented his opening remarks at approximately 7:45 PM and was followed by Mr. Richard Muller (U.S. Army contractor with Marstel-Day, LLC), who summarized the Army's findings as presented in the DEIS. Prepared text of Muller's comments is provided as Appendix B.

Approximately 45 people were in attendance (41 signed-in). Beyond those representing the Army and the Scoping Meeting support personnel were representatives of Virginia Department of Environmental Quality (VDEQ), Virginia State Senate, City of Hampton,

VA, FMFADA, and private citizens. The completed sign-in sheets are provided as Appendix C.

Following formal remarks, attendees were invited to voice their opinions and questions.

Before and after the formal speaking presentations, attendees were invited to browse the resource display panels and engage in discussion with the resource area specialists. Display panels were 2 feet wide and 3 feet high, bonded to foam core board and placed on easels. The subjects of panels were:

- Agenda Text
- Cultural Resources Graphic
- Cultural Resources Text
- CZM and Wetlands Graphics
- Fort Monroe Features Graphic
- Fact Sheet Text
- Natural Resources Graphic
- Overview of Alternatives and Results Text
- Re-Use Zones Graphic
- Reversionary Lands Map
- Transportation Study Area Map
- Transportation Study Area Text
- Wetland Delineation Graphic
- Other Resource Areas Text with Maps and other Graphics

Attendees were provided a handout of the NEPA Fact Sheet for the Fort Monroe EIS and a Public Comment form. Beyond the opportunity for comments from the floor and to the court reporter, attendees were clearly presented the methods by which they could provide further comment.

4.0 Public Comments

The following summarizes the comments received when the floor was open to anyone desiring to speak:

1. Mr. Stephen Corneliussen questioned where the National Park Alternative is discussed in the DEIS. After several others had spoken, Mr. Corneliussen stated that the use of the term Local “Redevelopment” Authority inherently implies redevelopment.

2. Mr. Tom Leary inquired about the progress of studies on various types of ammunition in the moat area and out into the Bay.

3. Mr. Mark Perrault wanted to know how impacts at Wherry Quarter were analyzed, short-term versus long-term, when there was no clear plan for the area.

4. Mr. Sam Martin asked for clarification on the difference between reversionary lands versus federal lands and also on economic conveyance.

5. There was a question on the analysis of environmental impacts of closure (primary impacts) versus reuse (secondary impacts).

6. There was a request for definitions of the types of alternatives evaluated in the DEIS (i.e., No Action, Early Transfer, Traditional Disposal, and Caretaker Status).

7. Mr. Louis Guy (Norfolk Historical Society), Ms. Joann Berkley (Northport Preservation Alliance), Ms. Sheri Bailey, and others, requested additional copies of the DEIS be placed in libraries beyond Hampton, like Norfolk and Newport News. (Two days later, copies of the DEIS were placed in 5 additional libraries in Norfolk, Newport News, and Portsmouth in response to these comments.)

8. Dorothy Rouse-Bottom recommended placing the graphics somewhere for the public to enjoy i.e. library. (These were placed in the Hampton Main Library.)

Three written comments were dropped in the comment box. These are provided in Appendix D.

A formal transcript of the meeting is presented in Appendix E (*note: the transcript will be added once it is received from the court reporter. If additional comments are found in the transcript then these will be added to this section*).

Appendix A. Prepared Text of Speech

(Muller/Marstel-Day – Primary Speaker)

WELCOME and thank you for coming to the Public Meeting for the Fort Monroe Disposal and Reuse Environmental Impact Statement.

About a year ago, near the end of last October, the Army sponsored a Scoping Meeting for the Fort Monroe Environmental Impact Statement that gave private citizens the opportunity to be part of the public involvement process for the closure of Fort Monroe. This process is required by the National Environmental Policy Act, or NEPA. Public involvement results in a better overall project because planners can draw from a broader spectrum of ideas.

I'm sure you remember that the NEPA process for Fort Monroe's closure started as an Environmental Assessment and it was largely because of public opinion that the Army changed its course of action and determined that the level of that analysis should be an Environmental Impact Statement … an EIS, and we are here tonight to gather input from you on the EIS.

This document is now available to you in Draft form, and was prepared to inform you of the Proposed Action, Alternatives to the Proposed Action, and any likely Environmental Consequences of those actions. It also describes measures that would need to be taken to mitigate those effects

The Draft EIS was made publically available on September 11th, a little over three weeks ago. That release date marked the beginning of a 45-day public review period which closes on October 26th. The Draft EIS has been and continues to be available to you on the web and in each of Hampton's five libraries to give you time to review the document before coming here tonight. You don't have to put down your pencils yet, there are still almost three weeks left in the 45-day period.

You have been invited here tonight because it's midway through the time window, and perhaps you've had a chance to look over the document but need some clarification before providing your response. Your responses will be included and considered in the Final EIS just as your concerns in the Scoping Process were included and considered in preparing the Draft EIS.

RECAP

At the Scoping Meeting, I presented you with a lot of information regarding the BRAC Commission's decision to close Fort Monroe, Army regulations for implementing NEPA, the numbers of civilian employees and military personnel working and living there, the Army organizations relocating from Fort Monroe to Fort Eustis and Fort Knox, and other items …notably including the significant history and historical value of the fort. I also spoke of federal property disposal alternatives such as early transfer, traditional disposal, caretaker status, and no action. The Draft EIS has all this in great detail so I won't take your time restating information you now have access.

What does bear repeating is that the Army's proposed action is to dispose of the excess federal property on Fort Monroe by September 15, 2011 …and reuse of Fort Monroe is

NOT an Army project, but it is being evaluated in the EIS because reuse is a secondary action resulting from disposal.

When closure does occur, State property will revert directly back to the Commonwealth of Virginia and Federal property will be transferred to the designated local reuse authority …the Fort Monroe Federal Area Development Authority (FMFADA).

Decisions for reuse are not being made by the Army and the Army expresses no preference on how Fort Monroe will be reused. The FMFADA has developed its reuse plan based on public input received here, at the Hampton Roads Convention Center, during the summer of 2006.

The EIS's analysis of effects considers the FMFADA's proposed reuse at three levels of intensity, and does not evaluate in detail any higher intensity reuse than the level of activity at the time of the BRAC Commission's decision to close Fort Monroe.

With Fort Monroe's status as a National Historic Landmark District and with many of its numerous structures listed on the National Register of Historic Places, planning for reuse at a higher intensity would not be feasible. The FMFADA's Reuse Plan is easily within this criteria. For each of the FOUR disposal alternatives I mentioned earlier (early transfer, traditional disposal, caretaker status, and no action) and each of the THREE levels of intensity of reuse (lower, middle, and upper), …direct, indirect, and cumulative effects were considered.

FINDINGS

The EIS evaluates in detail 12 environmental resource areas against the FOUR disposal alternatives and THREE reuse intensities. These resource areas are:

Land Use	Aesthetics & Visual Resources
Air Quality	Noise
Geology & Soils	Water Resources
Biological Resources	Cultural Resources
Socioeconomics	Transportation
Utilities	Hazardous & Toxic Substances

Of these twelve, two were found to have the potential for significant adverse effects: Transportation and Noise.

For Transportation, long-term moderate to significant adverse cumulative effects would be expected near Fort Monroe as a result of the Middle and Upper Bracket scenarios, when regional long-term growth in traffic is considered. Traffic flow could be significantly affected and may result in some deterioration of road networks and roadway congestion.

These effects may be temporary, as transportation infrastructure is expected to be upgraded in the future. Transportation modeling factored in regional cumulative growth in traffic, thus the results reflect the effect of reuse when added to this projected growth. The results of this analysis also indicate that significant adverse effects may be avoided with reasonable upgrades to the transportation networks over the 20 year period that is projected before redevelopment is complete.

Noise could also have long-term moderate to significant cumulative effects with the middle and upper bracket scenarios. Affected would be residences and businesses located along the public roads serving Fort Monroe. Impacts would be due not only to

increases in traffic over the next 20 years, but to military aircraft and ships that operate out of Norfolk Naval Base and Norfolk Harbor.

The one resource area that has been of greatest concern to the public has been Cultural Resources. With the exception of Geology & Soils, Cultural Resources would be one of the least affected of the TWELVE resources. One of the essentials of the FMFADA Reuse Plan is to "*Protect this Historic Place and Keep it Vital.*" It is the signed Programmatic Agreement for the Closure and Disposal of Fort Monroe that assures this reuse essential will be met. Parties on this agreement are United States Army, the Virginia State Historic Preservation Officer, the Advisory Council on Historic Preservation, the Commonwealth of Virginia, the FMFADA, and the National Park Service.

EIS SCHEDULE

One of the purposes of tonight's meeting is to provide you with a schedule on the NEPA process for Fort Monroe.

- the Notice of Availability of Draft EIS was published September 11, 2009 and we are now in a 45-day Public Review Period that ends October 26, 2009.
- the Public Meeting for Draft EIS is now, October 6, 2009
- a Notice of Availability of Final EIS is to be published February 16, 2010, followed by a 30-day waiting period …after which the
- Record of Decision is to be signed on April 7, 2010

One thing to note is that any of the above dates that occur in the future are subject to change.

PUBLIC INVOLVEMENT

Public involvement is a key component of the EIS process. Now that we are in the 45-day window for receiving comments on the Draft EIS, you have a chance to make comments and ask questions on the document.

The Army will consider including in the Final EIS issues of concern raised by the public, agencies, and other interested or affected parties relevant to the closure and reuse of Fort Monroe. Tonight we are here to listen to you and invite your comments and questions, and will formally respond to the written and transcribed comments in the Final EIS. These comments must be received prior to this October 26th.

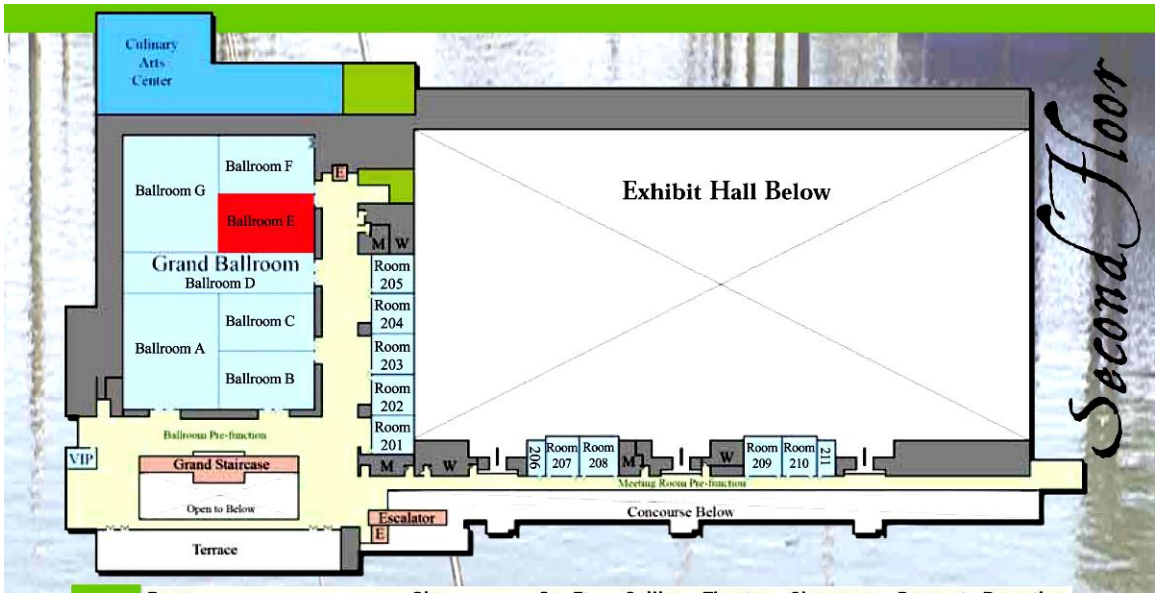
There are FOUR ways for you to provide input on the concerns you would like to have addressed in the Fort Monroe Final EIS.

1) Drop your completed comment form in the comments box before you leave here tonight;
2) Provide verbal comments to a court reporter during this meeting either by directing them to the podium, or speaking to the court reporter when the "formal" portion of this meeting ends;
3) Mail the comment form to the Fort Monroe address provided on the form; or
4) E-mail comments to the email address on your fact sheet.

Please remember that we are in the middle of a 45-day public comment period, so you have only a few weeks left.

Appendix B. Location and Layout of the Public Meeting

Hampton Roads Convention Center, 1610 Coliseum Dr., Hampton, VA 23666 / Ballroom E



Hampton Grand Ballroom
27,907 Total sq. ft.

Room	Size	Sq. Ft.	Ceiling	Theater	Classroom	Banquet	Reception
Ballroom A	70′ x 84′8″	5,927	24′	590	290	360	770
Ballroom ABC	140′ x 84′6″	11,830	24′	1,180	590	720	1,450
Ballroom ABCD	140′ x 114′8″	16,053	24′	1,600	800	1,070	2,150
Ballroom ABCDEFG	140′ x 199′4″	27,907	24′	2,790	1,390	1,860	3,890
Ballroom B	70′ x 42′	2,940	24′	290	140	180	350
Ballroom BC	70′ x 84′8″	5,927	24′	590	290	360	770
Ballroom C	70′ x 42′	2,940	24′	290	140	180	350
Ballroom G	70′ x 84′8′	5,927	24′	590	290	360	770
Ballroom EFG	140′ x 84′6″	11,830	24′	1,180	590	720	1,450
Ballroom DEFG	140′ x 114′8″	16,053	24′	1,600	800	1,080	2,150
Ballroom E	70′ x 42′	2,940	24′	290	140	180	350
Ballroom EF	70′ x 84′8″	5,927	24′	590	290	360	770
Ballroom F	70′ x 42′	2,940	24′	290	140	180	350

Sign-In Sheet

FORT MONROE BASE REALIGNMENT AND CLOSURE
DRAFT ENVIRONMENTAL IMPACT STATEMENT PUBLIC MEETING
HAMPTON ROADS CONVENTION CENTER
OCTOBER 6, 2009

Name	Organization *	Address	Phone	Email
Karen McPherson	Kimley-Horn	VB	213-8600	karen.mcpherson@kimley-horn.com
Phil Payette	Coast Defense Study Group	VB		
Timothy Reese	EA		410 935 3887	TREESE@EAEST.com
Nicole Nauth	EA		410 721-4950	nauth@eaest.com
Jean Thacker	Ft Monroe PAI		757-788-4057	jean.thacker@us.army.mil
Dorothy Rouse-Bottom	CFMNP	1500 Chesapeake Ave	Hampton	244-1084
Tom Leary	City Citizen	Hampton	722-0604	WTLVMI60@Aol.com
John Crossen	ACSIM-BRAC Army	Arlington VA	703-603-6448	John.a.crossen@us.army.mil
Christine Jacques Gergely	Bethel #185 United Daughters of the Confederacy	NN	757-930-3815	gergely@visi.net
Sandra Conquest	Concerned citizen	HOT	757-851-2959	CANEPOSA@cox.net
Carole Garrison	League of women voters	Hampton	757-827-7840	carole.garrison@gmail.com
JULIE CARVER	MATRIX DESIGN GROUP, INC.			julie.carver@matrixdesigngroup.com
Mark Adams		Newport News	757-591-8137	markadams515@cox.net
Bill Hornbuckle	FMFADA	Ft Monroe	757-637-7778	bourbonbuckle@FMFADA.com
BRIAN Peck	COE	Mobile District	251-690-2258	brian.e.peck@usace.army.mil
Christy Everett	Chesapeake Bay Foundation	142 W York St. 23510	622-1964	ceverett@cbf.org
Sam Martin	CFMNP/BCA/BTL	24 Monroe Dr. 23664	757-818-1163	SRMartinStudio@EarthLink.Net
Joanne Berkley	CFMNP			
Mark Perreault	CFMNP	950 Norview Ave, 23508	757-629-2751	perreault3@cox.net

* Please enter "self" if you are an individual member of the general public.

Sign-In Sheet

FORT MONROE BASE REALIGNMENT AND CLOSURE
DRAFT ENVIRONMENTAL IMPACT STATEMENT PUBLIC MEETING
HAMPTON ROADS CONVENTION CENTER
OCTOBER 6, 2009

Name	Organization *	Address	Phone	Email
Sherry Greshamer	Bethel Chapter NAACP	717 Village Green Pky. Newport News Va	369-2757	
STEVE CORNELIUSSEN	Citizens for a FT Monroe NP	202 Beach Poquoson	868-9658	Cornelusse@Verizon.net
Claire Jones	HRPDC	723 Woodlake Dr Ches	420-8300	cjones@hrpdcva.gov
Keith Cannady	City of Hampton		728-5239	Kcannady@hampton.gov
Dan Ruby	Kimley-Horn and Assoc.	501 Independence Pkwy Suite 300 Ches.	548-7300	dan.ruby@kimley-horn.com
JOSH GILLESPIE	FMFADA	151 BERNARD RD FM VA 23651	637 7778	jgillespie@fmfada.com
ADRIAN WHITCOMB	CITIZENS FOR A FT. MONROE NATIONAL PARK, POBX 1476, NN, VA 23601		380-6528	WEBPAGES2020@YAHOO.COM
John Mills	Senate of VA.			
Cecile Trevathan	Buckroe Improvement League	311 Richmond Dr 23664	851-9175	bebptheiway@gmail.com
Sheri Bailey	Juneteenth VA	917 Mt. Vernon Ave. Portsmouth, VA 23707		juneteenthva@yahoo.com

* Please enter "self" if you are an individual member of the general public.

FORT MONROE BASE REALIGNMENT AND CLOSURE
DRAFT ENVIRONMENTAL IMPACT STATEMENT PUBLIC MEETING
HAMPTON ROADS CONVENTION CENTER
OCTOBER 6, 2009

Name	Organization *	Address	Phone	Email
JAMES FOSTER	HQ, DEPT ARMY, ACSIM, PENTAGON		7036026409	James.Foster@us.Army.mil
CHRIS MALENDOSKI	- PRIVATE CITIZEN	NORFOLK, VA	757-685-3528	CHRIS@THE WRIGHT SITES.
Kent Apple	Private Citizen	301 E Big Sky Dr Hampton VA	757-865-9217	kentiapple@langley.com
Pete Peterson	City of Hampton	22 Lincoln St. Hampton VA	727-6319	PPeterson@hampton.gov
GB. King	BCA / Cantamar	300 N. First St. Hampton, VA. 23664		
Louis Guy	Norfolk Hist. Soc.	718 Botetourt Gdns, Norfolk 23507		louisguy@cox.net
D. Luis Otero		11 Hope Street North, Phoebus VA		

* Please enter "self" if you are an individual member of the general public.

Appendix D. Written Public Comments Received at Meeting

Fort Monroe Base Realignment and Closure
Environmental Impact Statement

Public Meeting Comment Sheet

Name: Louis Guy Date:
Organization You are Representing: Norfolk Histor. Society Self ☐
Mailing Address: 718 Botetourt Cir. City Norfolk State VA ZIP 23507
E-mail: louisguy@cox.net Telephone: 757-627-5991

Comments: Please deliver copies of DEIS to Norfolk Public Libraries
(1) Central Library
Plume St. @ Atlantic St
Norfolk, VA 23507
(2) Ocean View Library
(3) Larchmont Library

Portsmouth Main Library
Sue Burton, Main Librarian
juneteenthVA@yahoo.com
Sheri Bailey

Please note:
The Public Comment Period Ends October 26, 2009
Submit your comment sheet at this meeting
OR
Fold/staple/stamp and return by mail

Thank you.

Sign-In Sheet

FORT MONROE BASE REALIGNMENT AND CLOSURE
DRAFT ENVIRONMENTAL IMPACT STATEMENT PUBLIC MEETING
HAMPTON ROADS CONVENTION CENTER
OCTOBER 6, 2009

Name	Organization *	Address	Phone	Email
Theresa Zano McMillan	Versar Inc	6363 Center Dr Norfolk	4669798	tzmcmillan@versar.com
DAN ABRAMS	HRMFFA	100 W Main St NORVA		DAbrams@hrmffa.org
Rob Real	Fort Monroe DPW	DPW	757 788 5863	
MIKE HODSON	PAO FT MONROE	Bldg 27	757 7206	MIKE.HODSON@DOD.DOD.MIL
KAREN PERREAULT	CFMNP.ORG	950 HANOVER AVE NORFOLK 23508	489-0773	KARK PERREAULT@COX.NET
ERIC SALOPEK	VDEQ	629 E. MAIN ST. RICH VA	804/698-4427	ESSALOPEK@DEQ.VIRGINIA.GOV

* Please enter "self" if you are an individual member of the general public.

Fort Monroe Base Realignment and Closure
Environmental Impact Statement

Public Meeting Comment Sheet

Name: Carole Garrison
Date: 10/5/09
Organization You are Representing: Peninsula League of Women Voters. Self ☐
Mailing Address: 410 Shoreline Dr City Hampton State Va ZIP 23669
E-mail: carole.garrison@gmail.com Telephone: 757-727-7840

Comments: We have found cedar mentions on the Beaches & when dredging in the area from the years Fort Monroe has been open. A study is under way but not completed. My concern is the study will come in so late that citizen input will be irrelevant. When this study comes out will citizens have time to review & question finding of this report.

Thank you

Please note:
The Public Comment Period Ends October 26, 2009
Submit your comment sheet at this meeting
OR
Fold/staple/stamp and return by mail

Thank you.

Appendix E: Transcript of the Public Meeting

PUBLIC SCOPING MEETING

FORT MONROE BRAC

ENVIRONMENTAL IMPACT STATEMENT

October 6, 2009

Hampton, Virginia

TAYLOE ASSOCIATES, INC.

Registered Professional Reporters

Telephone: (757) 461-1984

Norfolk, Virginia

1 APPEARANCES:

2 Bob Edwards

3 Rich Muller

4

5

6

7

8 Public Speakers:

9 Steven Corneliussen

10 Robert Riali

11 Mark Perreault

12 William Armbruster

13 Sam Martin

14 Robin Mills

15 Louis Guy

16 Dorothy Rouse-Bottom

17 Joanne Berkley

18 Sheri Bailey

19

20

21

22

23

24

25

1 P R O C E E D I N G S

2 MR. EDWARDS: My name is Bob Edwards from
3 Fort Monroe. I'd like to welcome you here on behalf of
4 Colonel Reyes, who could not be here tonight. He's up
5 in Washington, D.C., at another requirement that he's
6 attending, so I'd like to welcome everybody.
7 I'd like to also recognize we have a lot of
8 people here that are very interested. We have ACSIM
9 BRAC back here to take an interest, James Foster; we
10 have Mobile District Corps of Engineers, Brian Peck;
11 Garrison staff obviously is here; and we also have --
12 Fort Monroe FADA is here in force. I hope to see them
13 right here, but they -- they were here. Oh, there they
14 are. John Crossen is there. All right.
15 We are here for you-all's public comments
16 here or after -- after tonight, you can provide us
17 several venues that we'll discuss. One of the ways you
18 can, on the Fort Monroe web page, there is a BRAC link
19 that links you to NEPA 106, but tonight it's NEPA. On
20 there, there's a memo that tells you also how you can
21 provide comments.
22 And one of those -- one of those ways,
23 there's a link to the Draft EIS right off that web page
24 that takes you up to the ACSIM web page. It takes you
25 to a NEPA site that has our Draft EIS on it. What's

1 neat about that page, it also has other Draft EIS's and
2 also published EIS's, so you can compare what other
3 installations are doing in this area. It's a pretty
4 good website. It also has our Draft EIS on it. So
5 there's a link there. It's a very long link, so
6 instead of us telling you what that is, if you just go
7 to our BRAC page on Fort Monroe and then look at the
8 memo we have on NEPA, it will explain all that to you.
9 Also, we have here today Marstel-Day, our
10 consultants, who's going to give you a review of where
11 we're at and where we're going and a little more detail
12 on how to provide public comments to the Draft EIS.
13 Richard?
14 MR. MULLER: Thank you, Bob, and welcome
15 everyone. Thank you for coming to the public meeting
16 for the Fort Monroe Disposal and Reuse Impact
17 Statement. I'm going to stick to a script here,
18 because what I have to say is important and I want you
19 to hear everything as the Army would like you to hear
20 it, and so we're going to go that route.
21 About a year ago, near the end of October
22 last year, the Army sponsored a scoping meeting for the
23 Fort Monroe Environmental Impact Statement and gave
24 private citizens the opportunity to be part of the
25 public involvement process for the closure of Fort

1 Monroe. This process is required by the National
2 Environmental Policy Act, or NEPA. Public involvement
3 results in a better overall project, because planners
4 can draw from a broader spectrum of ideas.
5 I'm sure you remember that the NEPA process
6 for Fort Monroe started off as an environmental
7 assessment, and it was largely because of public
8 opinion that the Army changed its course of action and
9 determined that the level of that analysis should be an
10 Environmental Impact Statement, an EIS, and we are here
11 tonight to gather input from you on the EIS.
12 This document is now available online to you
13 in draft form, and it's also available in five of the
14 Hampton libraries -- all of them -- and it was prepared
15 to inform you of the proposed action, alternatives to
16 the proposed action, and any likely environmental
17 consequences to the proposed actions to be implemented.
18 It also describes measures that will be necessary to
19 mitigate any adverse effects.
20 The Draft EIS was made publicly visible on
21 September 11 -- no comparison was made there -- a
22 little over three weeks ago. That release date marked
23 the beginning of a 45-day public review period which
24 closes on October 26. The Draft EIS has been and
25 continues to be available to you on the web, as Bob

1 just described, and in each of Hampton's five libraries
2 to give you time to review the document before coming
3 here tonight. But you don't have to -- you still have
4 time to respond. You don't have to put down your
5 pencils yet. There's still almost three weeks left in
6 the 45-day public review period.
7 You've been invited here tonight because
8 it's midway through this review process, and perhaps
9 you've had a chance to look over the document but need
10 some clarification before providing your responses.
11 That's why you have all these graphics spread around
12 the room. We have people here to assist you if you
13 need any help understanding what we have around the
14 room. Your responses will be included and considered
15 in the final EIS, just as your concerns in the
16 scoping -- or concerns regarding the scoping process,
17 we took those and rolled those into the EIS.
18 At the scoping meeting, I presented you with
19 a lot of information regarding the BRAC Commission's
20 decision to close Fort Monroe, Army regulations for
21 implementing NEPA, the number of civilian employees and
22 military personnel working and living there, the Army
23 organizations relocating from Fort Monroe to Fort
24 Eustis and Fort Knox, and other items, notably
25 including the significant history and historical value

1 of the fort.

2 I also spoke of federal property disposal

3 alternatives such as early transfer, traditional

4 disposal, caretaker status, and no action. The Draft

5 EIS has all this in detail, and I won't take the time

6 here to explain that to you when you readily have that

7 at hand.

8 What does bear repeating is that the Army's

9 proposed action is to dispose of excess federal

10 property at Fort Monroe by September 15, 2011, and

11 reuse of Fort Monroe is not an Army project, but it is

12 being evaluated in the EIS because reuse is a secondary

13 action resulting from Army disposal of it.

14 When closure does occur, state property will

15 revert directly back to the Commonwealth of Virginia

16 and federal property will be transferred to the

17 designated local reuse authority, the Fort Monroe

18 Federal Area Development Authority, FMFADA, and they

19 are here tonight.

20 Decisions to reuse are not made by the Army.

21 The Army expresses no preference on how Fort Monroe

22 will be reused. The FMFADA has developed its reuse

23 plan based on public input received here at the Hampton

24 Roads Convention Center during the summer of 2006.

25 The EIS's analysis of effects considers the

1 FMFADA's proposed reuse at three levels of intensity
2 and does not evaluate in detail any higher intensity
3 reuse than the level of activity at Fort Monroe at the
4 time of the BRAC announcement for closure of Fort
5 Monroe.
6 With Fort Monroe's status as a National
7 Historic Landmark district and with many of the
8 numerous structures listed on the National Register of
9 Historic Places, planning for reuse at a higher
10 intensity would not be feasible. The FMFADA's reuse
11 plan is easily within this criteria.
12 For each of the four disposal alternatives I
13 mentioned to you earlier -- traditional disposal,
14 caretaker status, early transfer, and no action -- and
15 each of the three levels of intensity -- which would be
16 low level, medium, and high -- direct, indirect, and
17 cumulative impacts were considered.
18 The EIS evaluates in detail 12 environmental
19 resource areas. These are land use, esthetics and
20 visual resources, air quality, noise, geology of soils,
21 water resources, biological resources, cultural
22 resources, socioeconomics, transportation, utilities,
23 and hazardous and toxic waste. Excuse me. Take two.
24 Hazardous and toxic substances.
25 Of these 12, two are found to have a

1 potential for significant adverse effects:
2 Transportation and noise. For transportation,
3 long-term moderate to significant adverse cumulative
4 effects would be expected near Fort Monroe as a result
5 of the middle and upper bracket scenarios when regional
6 long-term growth in traffic is considered. Traffic
7 flow could be significantly affected and may result in
8 some deterioration of road networks and roadway
9 congestion.
10 These effects may be temporary, as
11 transportation infrastructure is expected to be
12 upgraded in the future. Transportation modeling
13 factored in regional cumulative growth in traffic, thus
14 the results reflect the effect of reuse when added to
15 this projected growth. The results of this analysis
16 also indicate that significant adverse effects may be
17 avoided with reasonable upgrades to transportation
18 networks over the 20-year period that is projected
19 before redevelopment is complete.
20 Noise could also be expected at long-term
21 moderate to significant cumulative effects with the
22 middle and upper bracket scenarios. Affected would be
23 residences and businesses located along the public
24 roads serving Fort Monroe. Impacts would be due not
25 only to increases in traffic over the next 20 years,

1 but to military aircraft and ships that operate out of
2 Norfolk Naval Base and Norfolk Harbor.
3 One resource area that has been of greatest
4 concern to the general public regarding Fort Monroe is
5 cultural resources. With the exception of geology and
6 soils, cultural resources would be one of the least
7 affected of the 12 resource areas. One of the
8 essentials of the FMFADA's reuse plan is to protect the
9 historic place and keep it vital. It is the signed
10 Programmatic Agreement for the Closure and Disposal of
11 Fort Monroe that assures this reuse essential will be
12 met.
13 Parties on this agreement are the United
14 States Army, the Virginia State Historic Preservation
15 Officer, the Advisory Council on Historic Preservation,
16 the Commonwealth of Virginia, the FMFADA, and the
17 National Park Service.
18 One of the purposes of tonight's meeting is
19 to provide you with a schedule on the NEPA process for
20 Fort Monroe. The Notice of Availability of Draft EIS
21 was published September 11 -- I said that before -- and
22 we are now in the 45-day public review period that ends
23 October 26, 2009. The public meeting for the Draft EIS
24 is obviously right now, October 6.
25 A Notice of Availability -- a Notice of

1 Availability of Final EIS is to be published on
2 February 16, 2010, followed by a 30-day waiting period,
3 after which the Record of Decision is to be signed on
4 April 7, 2010. But the dates I just mentioned are in
5 the future and they are always subject to change.
6 Public involvement is a key component of the
7 EIS process. Now that we are in this 45-day window for
8 receiving comments on the Draft EIS, you have a chance
9 to make comments and ask questions about this document.
10 The Army will consider including in the Final EIS
11 issues of concern raised by you -- the public,
12 agencies, and other interested or affected parties --
13 relevant to the closure and reuse of Fort Monroe.
14 Tonight, we are here to listen to you and
15 invite your comments and questions, and we will
16 formally respond to the written and transcribed
17 comments in the Final EIS. These comments must be
18 received prior to October 26.
19 There are four ways for you to provide input
20 to the concerns -- Bob spoke about these -- if you
21 would like to have your comments addressed in the Final
22 EIS. If you've seen a draft, any comments you made at
23 the scoping meeting, they appear in that. Your name --
24 I mean, we heard you and we answered you. We addressed
25 your concerns in the Draft EIS.

1 So the four ways you can do this is drop
2 your completed comment form in the comment box.
3 There's one in the back of the room. It says Comments
4 and Questions. And you do that before you leave here
5 tonight.
6 You can provide verbal comments to the court
7 reporter -- we have one sitting right over here -- and
8 you can do that two ways. You can come up to this
9 microphone and speak to the group. I'm sure many of
10 you have something you want everybody to hear, or you
11 can -- so you can direct them to the podium or you can
12 speak to the court reporter after this meeting closes
13 or in private.
14 You can pull up a chair, sit right in
15 front -- oh, there's a chair already pulled up. It's
16 right in front of her office there, and you can sit and
17 talk to her and tell her what your thoughts are, and
18 she'll transcribe them and save you the trouble of
19 writing them down.
20 You can mail -- there's a comment form,
21 which you may have seen. If you don't have one, they
22 are provided as handouts. You can fill in your comment
23 on that and fold it over three times, like you'd put a
24 letter in an envelope. On the back side, you'll see
25 the address. Just staple it and put a stamp on it. It

1 will cost you 44 cents, but that's another way of
2 getting a comment to us.
3 To avoid the 44-cent charge, you can e-mail
4 your comments to the e-mail address on the back of your
5 fact sheet. Please remember we are in the middle of
6 this 45-day public comment period and you have only,
7 you know, about three weeks left to take care of that.
8 So at this point, that's the end of my
9 formal presentation. As I said earlier, we have
10 graphics around the room. You've had an opportunity to
11 look at those. If anything doesn't -- if you don't
12 understand anything about those or you need some
13 clarification, we can help you with that.
14 We're not here -- we're here to take
15 questions tonight. Your questions will be answered,
16 but not in this forum. This is -- we would like to
17 hear what your questions are, and we will answer them
18 formally in the Environmental Impact Statement. I
19 already have hands going up.
20 Steve, what do you have to say? Would you
21 like to come to the front?
22 MR. CORNELIUSSEN: I'd just like to ask a
23 question. Thanks very much for all this fine work.
24 Everybody appreciates it.
25 Question, I'd be grateful to know what did

1 the public tell you about the national park option to
2 be considered possibly in the EIS and to what extent,
3 if any, did you consider the national park option?
4 Thank you.
5 MR. MULLER: I'll answer that briefly in the
6 sense that -- we would like you to put your comment in
7 the box, but EIS -- you have look to Page ES-6,
8 Page 3-15 and Page 4-98, and that's where we encompass
9 our job in doing this environmental assessment to
10 determine the environmental effects of the Army action
11 and proposed reuse. We don't address specific plans.
12 We address -- we bracketed -- as I mentioned
13 earlier, we bracketed intensity for reuse. A type of
14 park like a national park or historical park, that is
15 bracketed in our analysis, and if you go to the EIS,
16 you'll see that. But look for those three pages I
17 mentioned, and if you want me to tell you those three
18 pages again later, I'll be glad to do that.
19 Anybody else?
20 Yes.
21 UNIDENTIFIED MALE SPEAKER: Yes, sir. In
22 your DEIS, was there a marine impact study on munitions
23 done not only around the moat area but also in the
24 Hampton Roads area itself, since Fort Monroe was a
25 fixed firing point from 1800 -- from the 1800s?

1 Thank you.

2 MR. MULLER: You're welcome. That study is

3 still ongoing, in my opinion. I'm not really qualified

4 to answer that question, so I'll be quiet about that.

5 Would anybody from Fort Monroe like to

6 express more detail on that?

7 Okay. Put that question in the box, please.

8 UNIDENTIFIED MALE SPEAKER: Yes, sir.

9 MR. RIALI: I'll address that. I'm Robert

10 [inaudible] --

11 (The court reporter interrupted for

12 clarification.)

13 MR. MULLER: Come on up here, Rob.

14 MR. RIALI: Rich is right. The study is

15 still ongoing, and we expect that study to be complete

16 in the early quarter of 2010. With regard to the far

17 shore or the munitions out into the bay, that's being

18 addressed by a different program. That's not going to

19 be addressed by the munitions investigation currently

20 ongoing, and those are discussions that are being --

21 ongoing at the Pentagon, so I really can't speak

22 towards that at all.

23 Did that answer your question?

24 UNIDENTIFIED MALE SPEAKER: Thank you.

25 MR. MULLER: Yes.

1 MR. PERREAULT: There is an area on the
2 post --
3 MR. MULLER: If anybody cannot hear the
4 gentleman, please raise your hand; otherwise, I'll ask
5 him to come up here.
6 MR. PERREAULT: I'll speak louder.
7 MR. MULLER: Okay.
8 MR. PERREAULT: Can you hear me okay?
9 MR. MULLER: I can hear you.
10 MR. PERREAULT: There's an area on Fort
11 Monroe that is in gray there which is called the Wherry
12 Quarter, sometimes the endangered green harbor of Fort
13 Monroe. This reuse plan considered its use
14 undetermined. I'd like to ask you to clarify the scope
15 of alternatives for the use of that property that you
16 considered in the Draft Environmental Impact Statement.
17 MR. EDWARDS: Sir, do you mind stating your
18 name?
19 MR. PERREAULT: Mark Perreault.
20 MR. EDWARDS: Thank you.
21 MR. MULLER: Would anyone from the FADA care
22 to update on the Wherry Quarter area being --
23 MR. ARMBRUSTER: Yeah.
24 MR. MULLER: Thank you, Bill.
25 MR. ARMBRUSTER: Bill Armbruster, executive

1 director of the Fort Monroe FADA.

2 In the reuse plan, you are correct, Mark,

3 that long-term use for the Wherry Quarter is to be

4 determined. The near term -- I'm talking the first 20

5 years -- it's a mixed-use area at the present time. It

6 will continue to be mixed use. We have housing in

7 there that we need to generate revenue if we're going

8 to make this place economically sustainable.

9 So we plan to do this in phases, but it will

10 continue to be -- we hope -- occupied for the near

11 term, and when I say near term, we're talking 20 years.

12 But by then, I think it's going to be pretty apparent

13 which direction we're going to go, and we're looking at

14 a number of options.

15 40 percent of the 564 acres out there is

16 already declared to be open green park area. This is

17 one that is connected with the moated area, but it has

18 a potential for tourism, it has a potential to extend

19 the park area, but right now for the near future, it

20 will be a mixed use.

21 Thanks.

22 MR. EDWARDS: Rich, I think the question was

23 how did we analyze that undetermined piece, and I think

24 it was in our different bands. Can you clarify?

25 MR. MULLER: That would have been analyzed

1 under -- well, there are a range of alternatives under
2 mixed use -- not mixed use, but low, medium, high
3 intensity. It was bracketed. Any type of use on the
4 installation would have been bracketed by that, and it
5 would have been under -- well, we have four
6 alternatives for disposal, which we discussed, but as
7 far as reuse, we discuss under intensities.
8 So really, it's flexible in a sense that if
9 Wherry Quarter becomes a -- just bulldozed the units
10 down, low intensity becomes medium intensity, which is
11 probably where it's going to wind up. We have analyzed
12 that as well.
13 MR. PERREAULT: The director just said
14 there's no -- it's undetermined.
15 MR. MULLER: Exactly.
16 MR. PERREAULT: I don't see how you can say
17 that's where it's going to probably end up. You cannot
18 possibly --
19 MR. MULLER: That's why I'm saying probably.
20 MR. PERREAULT: How can you say what's going
21 to happen in 20 years? Mr. Armbruster just said we're
22 not going to determine --
23 MR. EDWARDS: We'll strike that. It's
24 undetermined.
25 MR. PERREAULT: You said that you believe

1 it's going to be medium intensity use.

2 MR. MULLER: All I'm saying is any type of

3 use is bracketed by the type of analysis that was done.

4 MR. PERREAULT: So you have not -- you will

5 not prejudge that that's going to be for medium use?

6 MR. MULLER: No, I'm not.

7 MR. PERREAULT: All right.

8 MR. EDWARDS: But we did determine and we

9 did that -- because it's undetermined, we determined

10 there as of that -- up to the meeting level.

11 UNIDENTIFIED FEMALE SPEAKER: I couldn't

12 hear you.

13 MR. EDWARDS: We did determine -- because

14 it's undetermined, that parcel of land there was up to

15 the medium range of our intensity, because -- we can be

16 all the way low to medium because it's undetermined,

17 but there's no speculation on where the FMFADA is going

18 to go with that.

19 MR. MULLER: We consider medium a worst-case

20 scenario.

21 MR. EDWARDS: Right.

22 MR. PERREAULT: Thank you.

23 MR. MULLER: Sam?

24 MR. MARTIN: My name is Sam Martin. I'm a

25 citizen. I live in Hampton. Rich, I'm going to give

1 you a difficult mission. Because it is difficult in
2 the DEIS to understand, I think a lot of people here
3 would like to understand this better.
4 There's a certain portion of the land that
5 will be returned to the Commonwealth when the Army
6 gives it up in 2011. There's a certain portion of the
7 land that the Army claims it owns, and you're looking
8 at that separately from the land in -- somewhat
9 separately from the land that will be given back to the
10 Commonwealth, and it's a little complex to understand
11 that how it's written in the document.
12 You did a great job writing it -- don't get
13 me wrong -- because I did understand it, but you have
14 to go back and read very carefully. Could you go
15 through that briefly as to how you're handling that?
16 Because you're considering one a primary action and the
17 other a secondary action.
18 You've got some different terms you're using
19 for different things, so if you could explain that, I
20 would appreciate it. I think a lot of people here
21 would.
22 MR. MULLER: Well, the only primary action
23 is Army disposal of federal property on Fort Monroe.
24 MR. MARTIN: Right. I understand. But what
25 you're saying there, there is certain -- if you would

1 explain what is Army property and what is considered to
2 be -- considered to be the Commonwealth's property, and
3 you've also got something called an economic
4 development conveyance involved in there too. I just
5 want people to understand that, because it is rather
6 complex.
7 MR. MULLER: Well, I mean, we do have a
8 plat -- I didn't really go around the room and look at
9 them because I see them often enough, but I believe the
10 map that has land use areas is -- looks like it's all
11 the way in the back on -- to your left, and it clearly
12 outlines the federal property and state property.
13 There's also -- in fact, this whole
14 discussion about creative property still -- Robin, the
15 creative property still has not been --
16 MS. MILLS: The creative property is -- it's
17 reversionary property or federal property, and the map
18 is on the far left in the green and pink.
19 MR. MULLER: Okay. Thank you.
20 At any rate, we -- the federal property, as
21 you know, is pretty much the extension to the north --
22 the northern strip and there's some federal property to
23 the southwest side installation along where the marina
24 shoreline is, and that's where the bulk of it is. And
25 most of that is -- compared to the reversionary

1 property, it's heavily populated with buildings.
2 MR. MARTIN: It's in here, right, the
3 federal property here?
4 MS. MILLS: The pink property is federal
5 property, the green property reverts back to the
6 Commonwealth, and that is a metes and bounds survey.
7 That is complete now.
8 MR. EDWARDS: It's not hard but, Robin, come
9 on up and help me with this so I don't butcher it. The
10 good news is, if you remember before, there was a
11 different map. We have now completed a metes and
12 bounds survey, correct, Robin?
13 MS. MILLS: Yes.
14 MR. EDWARDS: Okay. Finish this.
15 MS. MILLS: Okay. Yes. The Army -- on the
16 first map that many of you saw, we had a little bit
17 different -- it was a fairly old map where the acreage
18 was estimated. We actually had a surveyor come, mainly
19 for the purposes of finishing our wetland survey, which
20 you see on this map in the middle of the room over
21 here. So we have a delineated wetland survey as well
22 completed. As part of that wetland survey, we were
23 able to actually do a full metes and bounds survey of
24 all of Fort Monroe.
25 So the great news is we now have detailed

1 acreage that actually reverts to the Commonwealth based
2 on deed research by a certified licensed surveyor that
3 actually will -- that the federal agency owns, the
4 Army. And the green, that reverts back to the
5 Commonwealth.
6 MR. MULLER: And we lost five acres, I
7 think.
8 MS. MILLS: Yeah. Well, I don't think it's
9 necessary to gets into the details. It is what it is.
10 It's a metes and bounds survey.
11 MR. EDWARDS: It's 464 acres now.
12 MS. MILLS: Yeah. If you -- yeah.
13 There's -- on here, 372 acres reverts back to the
14 Commonwealth, so the Army does not own that land. We
15 have to give it back to the state. The only property
16 that the federal owns is about 192 acres, which -- it's
17 a lot less than that for usable acres, because most of
18 this actually is in the creek and considered partly
19 wetland.
20 MR. EDWARDS: All right.
21 MS. MILLS: So really, the usable acres that
22 the Army owns is really this Area 3 and Area 2. The
23 rest reverts back to the Commonwealth.
24 MR. MARTIN: Now, let me carry that a little
25 further, where you are now, because I think everybody

1 understands that. The purple areas, the Army is
2 looking at developing an economic development
3 conveyance.
4 MS. MILLS: The Army doesn't develop an
5 economic --
6 MR. MARTIN: Okay. Would you explain that?
7 MS. MILLS: Yes. The Army -- the Army is
8 not in the business of reuse. We actually -- the DoD
9 has designated a local reuse authority, a
10 semigovernmental agency, which happens to be the
11 FMFADA, which Bill is the executive director. So they
12 are the recognized reuse authority that the DoD will
13 get into negotiations with as far as transfer of that
14 federally owned property.
15 They will actually get into negotiations
16 with the Commonwealth of Virginia, which has already
17 started, on the property that actually reverts back to
18 the Commonwealth as well, because they are the
19 recognized board that actually will develop the reuse
20 for the post.
21 MR. MARTIN: Now, let's take it another step
22 further. As Rich said, you are doing the Draft EIS for
23 the entire property.
24 MS. MILLS: Yes.
25 MR. MARTIN: Both parts. But the part that

1 reverts back to the Commonwealth, you're doing that
2 because it's a secondary action or is it because the
3 reuse is a secondary action?
4 MS. MILLS: No. The Army -- when we do a
5 closure EIS, our primary analysis is the Army departing
6 Fort Monroe, which in the BRAC world, we do a couple
7 different things, and when we realign bases, we
8 actually evaluate the environmental impacts of game,
9 people, fishing, building out things, and
10 what-have-you. It's a little different in this
11 situation, because actually the Army is leaving. So we
12 evaluate the impact of the Army leaving, which, as you
13 can imagine, the environmental impacts will be minimal.
14 It will reduce as far as the environmental impacts.
15 The secondary action is what the future
16 reuse will hold once the actual Army leaves. That, we
17 actually look to the reuse plan, which is developed by
18 the recognized reuse authority, to actually evaluate
19 that future land use, and in that evaluation of the
20 future land use, the Army has developed a NEPA process,
21 and that is where -- where's Rich -- Rich talked about
22 that, where they actually base it on -- because really
23 when you're dealing with property, the Army deals with
24 much bigger posts than this, as you can imagine.
25 They do it in a band approach, because you

1 don't necessarily know what the future reuse will be.
2 You can have predictions, and that's the best way that
3 we can -- that we actually have to analyze it. The
4 good news is we have an approved reuse plan that we
5 could actually get the details on now, that those
6 details in some of those areas as was mentioned are not
7 relatively or completely known, but they did -- Rich,
8 you can get into this with -- I don't know if any of
9 your other Marstel-Day counterparts are here, but they
10 looked at what they are predicting as their maximum
11 use, and that's the high end of what we looked at,
12 meaning every building on that post and, again, most of
13 that's in storage. So we can't do anything to the
14 building.
15 If we had those fully occupied, if in some
16 of those areas there was ability to build, what would
17 that be, how much would the population be, that kind of
18 analysis. So that was actually done, and that's what
19 represents those bands. And I'm not a NEPA expert, so
20 Rich can get into --
21 MR. MARTIN: You did a wonderful job. Thank
22 you very much.
23 MR. EDWARDS: The other thing you're getting
24 at is where we struggled back in 106 and we're all
25 trying to describe -- yes, we're treating Fort Monroe

1 as a whole, which I think most of the public says you
2 want us to continue to do that. Early on we said that.
3 So -- but we still have to recognize there is two
4 pieces of parcels here. There is reversionary land, so
5 we struggle describing that every time, and then we
6 also have land that is a federal process.
7 So I'm sure you're seeing that in this
8 document too where we're struggling on keeping it as a
9 whole, but also recognizing there is reversionary land
10 that the states have voluntary rights and then there's
11 a federal property which the federal government's used
12 to dealing with on all our documents.
13 But as you see, that's smaller pieces of the
14 property, and you're probably seeing that in the NEPA
15 as we dealt with it. Most of you-all -- 106 as we
16 struggled with it. We're working our way through that
17 process, so --
18 MS. MILLS: But as a whole, though, as far
19 as our analysis for NEPA goes, we looked at the post as
20 a whole and based it upon the predicted reuse. So
21 really, when you look at the division of the
22 reversionary and the federal, that's not what to
23 concentrate on. What to concentrate on is we will
24 leave -- the Army will leave, and what the reuse plan
25 actually says for -- we're trying to analyze what the

1 environmental impacts will be based on that reuse.
2 MR. MARTIN: One last question -- you did a
3 wonderful job. Thank you.
4 MS. MILLS: Oh, thank you.
5 MR. MARTIN: One last question. If you
6 could explain briefly -- you did a good job too, Bob.
7 If you could explain briefly the four
8 alternatives that you're looking at -- the no action
9 alternative and the other three -- so that everybody
10 can understand.
11 MR. MULLER: Sure. And I'll just clarify --
12 well, not clarify, just make sure you got what Robin
13 said. None of the alternatives we looked at bring Fort
14 Monroe to a level beyond where it was at the time of
15 the BRAC announcement. I said that in my prepared
16 speech and that holds true. So the net result as far
17 as environmental impacts are concerned would always be
18 less. Not factoring in economic growth or anything
19 else, I mean, but that -- our level that we are taking
20 to -- not even to that limit of current use.
21 The no action plan, that has to be -- that's
22 a requirement of NEPA. You have to look at that, even
23 though it's nothing -- it's not a feasible alternative,
24 but you have to look at that as a baseline against
25 which any other actions are done. In other words, if

1 we don't do anything, this is what's going to happen,
2 and then take that and then we do this, which is a
3 little bit more. What's the effect?
4 And you're not starting from zero; you're
5 starting from current conditions, no action. And then
6 if you totally turn the whole thing into a grazing
7 area -- well, not even grazing, just plowing everything
8 over, well, that would be bad too, because there's
9 impacts with that because where did the fort go?
10 But anyway, that is -- the no action plan is
11 what it is -- what it was -- not today, what it was at
12 the time of the BRAC announcement. That's the way it's
13 been in every round of NEPA. You freeze it and take a
14 snapshot right there. That's it. That's no action.
15 Don't do anything. Just leave it like it was on that
16 particular day.
17 MR. MARTIN: I think that's November 2005,
18 right?
19 MR. MULLER: Sounds right. So we
20 essentially base everything around conditions of
21 November 2005 at Fort Monroe.
22 Early transfer, that's where -- as we see
23 it, say there's cleanup required on a parcel of land
24 that requires cleanup before we can transfer. Okay.
25 We got that done. We're not going to wait for the

1 entire installation to be ready for transfer. We can
2 take that piece of property and turn it over to the
3 local reuse authority at this point, because it's done
4 and ready to go. And then we piecemeal it out piece by
5 piece as we move along the process of cleanup or
6 restoration or whatever needs to be done.
7 And then traditional disposal is when we
8 wait until the entire installation is ready to go and
9 say okay -- it's like when you move out of your house.
10 I'm going through this right now. When you move out of
11 your house and you say, Okay, it's time to fumigate,
12 I'm out, everything's done.
13 In this case, we wouldn't be fumigating, but
14 essentially what I'll say is turn over the keys, we're
15 out of the gate, you can remove the guard shack, we're
16 done. Up to that point, no property's been transferred
17 and that's traditional disposal.
18 Now, caretaker status, which is totally
19 irrelevant to this situation, is when you have -- and
20 we've had this in other installations but not Fort
21 Monroe. When you have nobody that wants to take over
22 the installation or there's some legal thing holding it
23 up, the Army just doesn't walk out and let the whole
24 thing deteriorate.
25 There's certain levels of caretaking that

1 need to be done based on how long it's going to go on
2 like that, long-term maintenance or -- but basically
3 mothballing the installation. If it looks like it's
4 been a year, you don't have to -- there's certain
5 things you don't have to do. But if it's going to go
6 on and on, then you really have to do some sincere
7 mothballing of the installation.
8 But caretaker status is not the issue here.
9 It applies really taking over from the Army as soon as
10 possible. September 15, we're gone and, you know,
11 that's the way it's going to be.
12 MR. MARTIN: Thank you. Good answer.
13 Thanks.
14 MR. MULLER: Yes. Steve?
15 MR. CORNELIUSSEN: Thank you. Clarify
16 something for me, please. Am I wrong to think when you
17 say local reuse authority, the BRAC law actually --
18 isn't it true that the BRAC law doesn't actually use
19 that term even --
20 MR. MULLER: No.
21 MR. CORNELIUSSEN: -- whether it's for a
22 humdrum camp draft somewhere or for a national
23 treasure, it says local redevelopment authority? Isn't
24 it true that it presumes redevelopment no matter what
25 kind of base it is?

1 MR. MULLER: Yes. I misspoke. Yes. It's a
2 federal -- it's not a local. It's a federal area.
3 That's what FMFADA means.
4 MR. CORNELIUSSEN: But LRA, Local
5 Redevelopment Authority, is the language in the law,
6 not reuse and redevelopment -- even at Fort Monroe.
7 True statement?
8 MR. MULLER: I think I understood --
9 MS. MILLS: I think it's a term of art.
10 It's one and the same.
11 MR. MULLER: Yes.
12 MR. GUY: I'm Louis Guy with the Norfolk
13 Historic Society. This is awfully complicated, and I
14 thank you for the answers and the good questions.
15 Seems to me that it takes a whole lot of digging to
16 even understand the questions to be able to get to the
17 answers, and the DEIS is not an easy document to
18 digest.
19 I'm among a lot of the citizens who are not
20 comfortable reading on a computer screen, and this is
21 an awful lot of pages. This is so important, though.
22 I mean, this isn't just caretaking and locking up. I
23 don't care how large the post is that's being
24 abandoned. This is a national historic monument and
25 it's clearly of national importance, some of us would

1 say international importance.

2 I regret the fact that your distribution was

3 to libraries within the city of Hampton. Ocean View

4 Library in Norfolk definitely should have one of the

5 copies of your DEIS. Then our citizens could sit and

6 look -- pore over it to understand it, and I would

7 suggest other neighboring communities -- Newport News,

8 maybe even Poquoson -- might benefit from that.

9 I think Norfolk's central downtown library

10 and the Ocean View library, there would be a lot of

11 people that are concerned -- directly concerned with

12 what's happening at Fort Monroe or what may happen, and

13 I would ask you -- I know it's late in your

14 distribution process, but it can't be too hard for you

15 to bump this up and send it over to some of the

16 libraries that are well-traveled, at least nearby the

17 city of Hampton, not limited only to within the city of

18 Hampton.

19 MR. MULLER: I agree that every time I get

20 something online to review, like the -- fortunately, it

21 was -- the FMFADA's reuse plan was also available in

22 hard copy. I managed to pirate one of those away from

23 Bill's office. But if it wasn't, many times, I'll just

24 go print something off my computer, just download and

25 print it, and that's what we expected, you know,

1 anybody -- I haven't received any comments from anybody
2 having requested a hard copy, but if you put that in
3 the comment box --
4 MR. GUY: I will.
5 MR. MULLER: But I'm not suggesting you do
6 that. If you were to put it in the comment box, it may
7 be another, you know, week or so before we got around
8 to that and more time would be lost. So if there's any
9 specific -- I mean, you've got to consider the
10 environmental impact of printing off these documents.
11 I think it's quite -- it's not just the expense. It's
12 the paper that goes into it. Just the ones we had to
13 circulate, the pile would have been almost as tall as I
14 am. And I just look at it, well, there's a tree.
15 MR. GUY: Better you printing them off than
16 me printing them off, because my wife has a budget on
17 me too.
18 MR. MULLER: Anyway, what I'm saying, Louis,
19 is if you've got a library you want to put that in,
20 please let me know and I'll get some copies made,
21 because I ran out of my last copy and DEQ needed
22 another copy, so I gave my mine up to the FedEx
23 yesterday morning.
24 Yes, ma'am?
25 MS. ROUSE-BOTTOM: Yes. I appreciate what

1 Louis is saying. I also would like to comment that
2 this is a beautiful facility, beautifully set forth.
3 The pictures are wonderful. It's a real teaching tool.
4 It would be awfully nice if it could stay up somewhere
5 in a protected place so people could wander in and see
6 it and not absorb it all at one time. I am one who
7 really has to read it from a -- I can't read it from a
8 computer.
9 And before you end, I would appreciate it if
10 you'd give me a chance to say something else, then I'll
11 really hold my comments.
12 MR. MULLER: Nobody's cutting anybody off
13 here tonight. This is your meeting, not mine. Would
14 you like to come speak at the podium?
15 MS. ROUSE-BOTTOM: Sure. Yes.
16 MR. MULLER: I've heard you speak before at
17 the -- I've heard you do the radio. That was very
18 nicely done.
19 MS. ROUSE-BOTTOM: I'm Dorothy Rouse-Bottom,
20 and I am here to invite your interest in a
21 conference --
22 MR. MULLER: Dorothy, could you speak into
23 the microphone?
24 MS. ROUSE-BOTTOM: I'm Dorothy Rouse-Bottom,
25 and I'm here to invite your interest in the conference

1 that's going to take place a week from Saturday at the
2 Chamberlin Hotel, and it is about the beginning of
3 forts in Anglo-America. Algernoune Fort was occupied
4 in October of 1609. It was built to protect the colony
5 in Jamestown, chiefly against encouragement of the
6 Spanish. It was a flimsy little thing. Nonetheless --
7 and it was so described by Spanish investigators, that
8 it looked like it could blow down at any time.
9 However, it served to keep them from coming into the
10 Chesapeake Bay, and those ships turned around and went
11 back to the ocean.
12 It was here for a particular purpose -- and
13 I'm going to summarize, because I love to talk about
14 this and I'll talk and talk if I don't. But the
15 conference has been sponsored by many people and has
16 been largely directed by me because of my conviction
17 that the ethos of America began right here, right at
18 the end of Point Comfort, and the kind of America that
19 we are now is not at all unlinked to the kind of
20 America we were in October of 1609.
21 The amazing things that the people who came
22 to that little fort when it was first occupied by the
23 40 men -- Captain James Davis was their captain. The
24 man who had been the original head of it, Captain --
25 I'm sorry. I just had a mental -- Ratcliffe. John

1 Ratcliffe had been horribly killed before the fort
2 really had gotten started very much and James Davis
3 took it over, and it was here to protect. The
4 symposium is going to consider how the maritime rim of
5 Colonial Virginia developed. I think from the maritime
6 rim of Colonial Virginia, all of the beginning ethos of
7 America stemmed.
8 What the fort did was to introduce English
9 maritime law to the New World in hopes that basic
10 customs, duties, regulated commerce, and enforced
11 allegiance to the British crown, which meant it forced
12 government and chiefly it claimed in its tiny little
13 presence England's bid for sovereignty over vast
14 regions of the Atlantic seashore, including one mile of
15 the sea and including 200 miles north of Old Point
16 Comfort. That's in the southern charter.
17 It was Point Comfort. It didn't get old
18 until Captain John Smith was nearly poisoned to death
19 by a stingray, and the place that he sought refuge
20 while he was recovering from his wound he named New
21 Point Comfort. You know, where that beautiful
22 lighthouse is. Old Point Comfort was not a real, real
23 long distance from the new Point Comfort, but it was
24 always called Point Comfort in this area. But the
25 little structure was a visible symbol of government.

1 This is where the nation started, not in New
2 England, for God's sake, and not with Bradford sitting
3 down in a big black hat and having a turkey wing with
4 Indians. It also didn't exactly start with Jamestown.
5 Jamestown did not continue. This community did.
6 And Jamestown was an aristocratic community,
7 so the distribution of food, when they had little, much
8 favored the people from those well-known families of
9 whom Lord De La Warr was one; George Percy was one, who
10 was the youngest brother of the Earl of Northumberland,
11 the ninth earl -- Henry Percy, the ninth earl. And
12 Algernoune Fort was named for their forebearer who had
13 come -- William McConklin -- to England and had founded
14 one of the great noble families in England.
15 The continuity of the time and people is
16 what is such -- this community, and every square inch
17 of Old Point Comfort goes back to that time. The
18 people who went there on the Captain Davis, the flay
19 [phonetic] men and then the ten women and children --
20 by 1611, there were women and children there. This was
21 reported by a Spanish spy and it was also reported by
22 an English pilot who was kidnapped from Fort Algernoune
23 to get a pilot to take them out through the shoals, and
24 he was later hauled off to Savannah and asked to come
25 in and give a deposition about what he had seen here to

1 a court -- a Spanish court.

2 That's all written down, and it can be

3 re-created to some extent when these people were --

4 Bill Kelso's going to come to our conference. He's

5 gotten so excited about it that he is ready to start

6 speculating a little bit about exactly where Algernoune

7 Fort was placed and whether or not there might be any

8 archeological evidence left. You will remember that

9 when Fort Monroe was built, it was built in

10 extraordinary amounts of stone, and so they went deep

11 to put that down.

12 I can't stop talking about this, so I'm just

13 going to end this and let you all go. The symbol of

14 government, the symbol of sovereignty, and the people

15 who came to Fort Algernoune stayed. They may not have

16 all been precisely brought over to the mainland. It

17 was a few months later after the founding of Fort

18 Algernoune in October of 1609 that Sir Thomas Gates

19 brought a group of very highly trained soldiers that he

20 had brought from the Netherlands and they were seasoned

21 and knew exactly what to do.

22 He brought 100 of them is what I understand.

23 I haven't seen that myself, but someone told me that he

24 brought 100 people here on July 9, 1610. And at the

25 very early crack of dawn, he had hidden them in the

1 woods. He had a tabaret come and play sweet music and
2 the Indians came out. That use of the tabaret was
3 always a signal that -- to have a party, and they came
4 and all of the fighting men were killed and many others
5 injured and they took their injured selves all through
6 the woods, never to come back. Those were the
7 Kecoughtans who saved the lives of the first settlers
8 here.
9 We have a heavy history. Fortunately, the
10 founding of Fort Algernoune is not that same
11 tragedy-ridden blood-soaked history of Hampton. There
12 was no one who wanted to put a fort on Old Point
13 Comfort at that time, because the Bourbons tore things
14 down as fast as they could build them up. Algernoune
15 itself did not last very long. The people, however,
16 moved over to Kecoughtan after Kecoughtan -- on that
17 same day as the removal of the Indians, on that same
18 day, people were put in charge there of planting vines
19 and cultivating the fields.
20 The Indians were famous for their
21 cultivating fields. They had between 2- or 3,000 acres
22 of fertile land they were able to trade food for goods.
23 The people who were at Fort Algernoune moved directly
24 over there. They were needed. They were needed to
25 hold the fort, and so the continuity from Algernoune

1 from Point Comfort is continuous from October 4, 1609,
2 till this very day.
3 This will all be looked at by some of the
4 top scholars in the field of early history on the
5 Saturday a week from now, and I invite you all to think
6 about attending. It's going to be absolutely
7 fascinating, and the scholars who are in on this are
8 themselves -- I had a wonderful letter from Bill Kelso
9 that said he had gotten so excited about this idea that
10 he was really going to -- he hoped he had more than the
11 45 minutes allotted to him, but he doesn't. It's going
12 to move right along so that six people can get through
13 in one day.
14 But I invite you to think about -- I have a
15 couple brochures. This is what it looks like, and I
16 would be real glad to talk on and on about it to any of
17 you all who might care to ask. If you love Fort
18 Monroe -- you wouldn't be here tonight if you didn't --
19 this gives you the very beginning, but it's also the
20 very beginning of this nation. That's why it's far
21 more important than any other BRAC closing that's ever
22 taken place.
23 Thank you.
24 MR. MULLER: Thank you, Dorothy. I thought
25 I had some information about the background on Fort

1 Monroe and EIS, but I left it alone. But that's always
2 important.
3 Anybody else have anything else they'd like
4 to say? We're trying to close this thing up by 9:00,
5 which is about 20 minutes from now. So we still have
6 20 minutes.
7 MS. BERKLEY: Question.
8 MR. MULLER: I see your hand. Would you
9 like to come up or would you --
10 MS. BERKLEY: I can speak from here. I'm
11 Joanne Berkley from the Norfolk Preservation Alliance.
12 MR. MULLER: It's important for the court
13 reporter to hear you. I'm sorry.
14 MS. BERKLEY: This is a very short
15 statement. I'm with the Norfolk Preservation Alliance.
16 I echo Louis Guy's comments on the availability of the
17 DEIS. My question is, I think I heard you say that
18 they would be placed in the Norfolk library without us
19 writing a letter, and I wondered how we would be
20 notified when they would be placed there. Is that
21 clear?
22 MR. MULLER: What I told Louis and I'll tell
23 you is I'm -- rather than put it in the box, give it to
24 me tonight and I'll get to FedEx -- not FedEx. I'll
25 get to an Office Depot tomorrow and have them run off

1 the copies that need to be done, and I'll put them in
2 there. So you'll have to trust me on that, or you can
3 put it in the box and you can wait a week. You can do
4 it formally. I'm just saying I think your chances are
5 better of seeing it sooner if you just --
6 MS. MILLS: We will put a copy in those
7 libraries.
8 MS. BERKLEY: Automatically?
9 MS. MILLS: Yes.
10 MR. MULLER: You just got that from the
11 Army. I'm just a private citizen, as you are.
12 MS. BERKLEY: Thank you.
13 MR. MULLER: Okay. But we need to know
14 which libraries and give me the address. Okay?
15 Yes, ma'am.
16 MS. BAILEY: Yes. My name is Sheri Bailey
17 and I'm with the Juneteenth Festival. Juneteenth
18 celebrates the signing of the Emancipation Proclamation
19 that ended slavery in America. As you can imagine, we
20 are quite excited about Fort Monroe reverting to the
21 public stewardship, and our hope is that also we'd like
22 to get a copy of the report in the Portsmouth Public
23 Library because that's where we're based, but we're all
24 over the region.
25 What we do is we take this local history and

1 we create plays that help people look back at this
2 difficult painful history without shame and without
3 blame. And so we see Fort Monroe as being that fourth
4 corner of the historic quadrangle that will allow the
5 world to come here and understand how indeed this is
6 the first nation, the first community.
7 And we -- if we can help people look back at
8 this difficult history -- again, without shame and
9 without blame -- we become a role model for the rest of
10 the world in terms of how to move beyond that pain and
11 that history that is so difficult to hear, but from
12 that history we are able to show people how we can move
13 beyond that into a much stronger and brighter future.
14 So my hope is that we will be able to do
15 what Mr. Guy had mentioned in terms of just breaking
16 this down so it is legible and understandable to folks,
17 because when I first got here -- I got here late, but
18 you were throwing around a lot of alphabets and
19 everything, and it's complicated even with this handout
20 here.
21 So I think the library -- to have a copy of
22 the report in every library in the region, I mean, I
23 think depending on who you talk to, there's 17 or 22
24 entities that make up Hampton Roads, and if there could
25 be one copy at Virginia Beach central, Portsmouth

1 public -- you know, the main libraries, that would be
2 tremendously helpful. And I understand there's a cost
3 involved with that, but I think the cost of not doing
4 it is even greater.
5 Thank you.
6 MR. MULLER: Okay. Those of you who
7 mentioned it, give me a list of libraries you'd like to
8 see them in. Give -- be sure to put your name and some
9 contact information so I can let you know that they are
10 there. That will help you, rather than go back and
11 forth to the library waiting for it. It shouldn't be
12 but a few days. It should be there quickly. I realize
13 this clock is ticking and not going to change, but I
14 will get them in there as quickly as I can and I'll
15 contact you. Give me your information so I can let you
16 know it's there.
17 Okay. Anybody else like to speak?
18 Okay. With that, I call this meeting to --
19 at least the formal part to an end. Well, this isn't
20 formal. If you'd like to make any comments to the
21 court reporter, don't forget you can sit in the chair
22 and talk to her. She's here till 9 or a little after,
23 and don't forget we have a suggestion box. We have an
24 e-mail and you can e-mail or mail them in by service
25 mail and pay 44 cents. So comments, questions,

1 anything like that, we'll take them all and handle them
2 in the final EIS.
3 So thank you again for coming tonight. It's
4 a pleasure having you here, and we appreciate all the
5 insight we got from you. Good night.
6 (The formal proceedings concluded at 8:35
7 p.m)
8 MS. BAILEY: Sheri Bailey, representing the
9 Juneteenth Festival Company. Juneteenth celebrates the
10 signing of the Emancipation Proclamation and the end of
11 slavery in America. I feel that we have a
12 responsibility here in Virginia to be able to share
13 this history with the world that basically documents
14 the beginning of America.
15 With that, we are looking at Fort Monroe as
16 being critical and a priority in terms of being able to
17 allow that history to be properly shared with the
18 world.
19 (The meeting adjourned at 9:00 p.m.)
20
21
22
23
24
25

COURT REPORTER'S CERTIFICATE

I, Kimberly A. Heiser, Registered Professional Reporter, certify that I recorded verbatim by stenotype the proceedings in the captioned cause, Hampton, Virginia, on the 6th day of October, 2009.

I further certify that to the best of my knowledge and belief, the foregoing transcript constitutes a true and correct transcript of the said proceedings.

Given under my hand this 14th day of October, 2009, at Norfolk, Virginia.

Kimberly A. Heiser, RPR

Notary Public

Notary No. 7107012

A

abandoned 32:24
ability 26:16
able 22:23 32:16 40:22 44:12,14 46:12,16
about 4:1,21 11:9,20 13:7,12 14:1 15:4 21:14 23:16 25:21 36:2,13 38:25 39:5,6 39:12 41:6,9,14,16 41:25 42:5 43:20
absolutely 41:6
absorb 35:6
acreage 22:17 23:1
acres 17:15 23:6,11,13 23:16,17,21 40:21
ACSIM 3:8,24
Act 5:2
action 5:8,15,16 7:4,9 7:13 8:14 14:10 20:16,17,22 25:2,3 25:15 28:8,21 29:5 29:10,14
actions 5:17 28:25
activity 8:3
actual 25:16
actually 22:18,23 23:1 23:3,18 24:8,15,17 24:19 25:8,11,17,18 25:22 26:3,5,18 27:25 31:17,18
added 9:14
address 12:25 13:4 14:11,12 15:9 43:14
addressed 11:21,24 15:18,19
adjourned 46:19
adverse 5:19 9:1,3,16
Advisory 10:15
affected 9:7,22 10:7 11:12
after 3:16,16 11:3 12:12 39:17 40:16 45:22
again 14:18 26:12 44:8 46:3
against 28:24 36:5
agencies 11:12
agency 23:3 24:10
ago 4:21 5:22
agree 33:19
agreement 10:10,13
air 8:20
aircraft 10:1
Algernoune 36:3 38:12,22 39:6,15,18 40:10,14,23,25
allegiance 37:11
Alliance 42:11,15
allotted 41:11
allow 44:4 46:17
almost 6:5 34:13
alone 42:1
along 9:23 21:23 30:5 41:12
alphabets 44:18
already 12:15 13:19 17:16 24:16
alternative 28:9,23
alternatives 5:15 7:3 8:12 16:15 18:1,6 28:8,13
always 11:5 28:17 37:24 40:3 42:1
amazing 36:21
America 36:17,18,20 37:7 43:19 46:11,14
among 32:19
amounts 39:10
analysis 5:9 7:25 9:15 14:15 19:3 25:5 26:18 27:19
analyze 17:23 26:3 27:25
analyzed 17:25 18:11
Anglo-America 36:3
announcement 8:4 28:15 29:12
another 3:5 13:1 24:21 34:7,22
answer 13:17 14:5 15:4,23 31:12
answered 11:24 13:15
answers 32:14,17
anybody 14:19 15:5 16:3 34:1,1 35:12 42:3 45:17
anyone 16:21
anything 13:11,12 26:13 28:18 29:1,15 42:3 46:1
anyway 29:10 34:18
apparent 17:12
appear 11:23
APPEARANCES 2:1
applies 31:9
appreciate 20:20 34:25 35:9 46:4
appreciates 13:24
approach 25:25
approved 26:4
April 11:4
archeological 39:8
area 4:3 7:18 10:3 14:23,24 16:1,10,22 17:5,16,17,19 23:22 23:22 29:7 32:2 37:24
areas 8:19 10:7 21:10 24:1 26:6,16
aristocratic 38:6
Armbruster 2:12 16:23,25,25 18:21
Army 4:19,22 5:8 6:20 6:22 7:11,13,20,21 10:14 11:10 14:10 20:5,7,23 21:1 22:15 23:4,14,22 24:1,4,7 24:7 25:4,5,11,12,16 25:20,23 27:24 30:23 31:9 43:11
Army's 7:8
around 6:11,13 13:10 14:23 21:8 29:20 34:7 36:10 44:18
art 32:9
asked 38:24
assessment 5:7 14:9
assist 6:12
ASSOCIATES 1:22
assures 10:11
Atlantic 37:14
attending 3:6 41:6
authority 7:17,18 24:9 24:12 25:18 30:3 31:17,23 32:5
Automatically 43:8
availability 10:20,25 11:1 42:16
available 5:12,13,25 33:21
avoid 13:3
avoided 9:17
away 33:22
awful 32:21
awfully 32:13 35:4

B

back 3:9 7:15 12:3,24 13:4 20:9,14 21:11 22:5 23:4,13,15,23 24:17 25:1 26:24 36:11 38:17 40:6 44:1,7 45:10
background 41:25
bad 29:8
Bailey 2:18 43:16,16 46:8,8
band 25:25
bands 17:24 26:19
base 10:2 25:22 29:20 31:25
based 7:23 23:1 27:20 28:1 31:1 43:23
baseline 28:24
bases 25:7
basic 37:9
basically 31:2 46:13
bay 15:17 36:10
Beach 44:25
bear 7:8
beautiful 35:2 37:21
beautifully 35:2
become 44:9
becomes 18:9,10
before 6:2,10 9:19 10:21 12:4 22:10 29:24 34:7 35:9,16 37:1
began 36:17
beginning 5:23 36:2 37:6 41:19,20 46:14
behalf 3:3
being 7:12 15:17,20 16:22 32:23 44:3 46:16,16
belief 47:9
believe 18:25 21:9
benefit 33:8
Berkley 2:17 42:7,10 42:11,14 43:8,12
best 26:2 47:8
better 5:3 20:3 34:15 43:5
between 40:21
beyond 28:14 44:10,13
bid 37:13
big 38:3
bigger 25:24
Bill 16:24,25 24:11 39:4 41:8
Bill's 33:23
biological 8:21
bit 22:16 29:3 39:6
black 38:3
blame 44:3,9
blood-soaked 40:11
blow 36:8
board 24:19
Bob 2:2 3:2 4:14 5:25 11:20 28:6
Both 24:25
bounds 22:6,12,23 23:10
Bourbons 40:13
box 12:2 14:7 15:7 34:3,6 42:23 43:3 45:23
BRAC 1:9 3:9,18 4:7 6:19 8:4 25:6 28:15 29:12 31:17,18 41:21
bracket 9:5,22
bracketed 14:12,13,15 18:3,4 19:3
Bradford 38:2
breaking 44:15
Brian 3:10
briefly 14:5 20:15 28:6 28:7
brighter 44:13
bring 28:13
British 37:11
broader 5:4
brochures 41:15
brother 38:10
brought 39:16,19,20 39:22,24
budget 34:16
build 26:16 40:14
building 25:9 26:12,14
buildings 22:1
built 36:4 39:9,9
bulk 21:24
bulldozed 18:9
bump 33:15
business 24:8
businesses 9:23
butcher 22:9

C

C 3:1
call 45:18
called 16:11 21:3 37:24
came 36:21 39:15 40:2 40:3
camp 31:22
captain 36:23,23,24 37:18 38:18
captioned 47:6
care 13:7 16:21 32:23 41:17
carefully 20:14
caretaker 7:4 8:14 30:18 31:8
caretaking 30:25 32:22
carry 23:24
case 30:13
cause 47:6
celebrates 43:18 46:9
Center 7:24
central 33:9 44:25
cents 13:1 45:25
certain 20:4,6,25 30:25 31:4
CERTIFICATE 47:1
certified 23:2
certify 47:5,8
chair 12:14,15 45:21
Chamberlin 36:2
chance 6:9 11:8 35:10
chances 43:4
change 11:5 45:13
changed 5:8
charge 13:3 40:18
charter 37:16
Chesapeake 36:10
chiefly 36:5 37:12
children 38:19,20
circulate 34:13
citizen 19:25 43:11
citizens 4:24 32:19 33:5
city 33:3,17,17
civilian 6:21
claimed 37:12
claims 20:7
clarification 6:10 13:13 15:12
clarify 16:14 17:24 28:11,12 31:15
cleanup 29:23,24 30:5
clear 42:21
clearly 21:11 32:25
clock 45:13
close 6:20 42:4
closes 5:24 12:12
closing 41:21
closure

WORD INDEX

4:25 7:14 8:4 10:10 11:13 25:5
Colonel 3:4
Colonial 37:5,6
colony 36:4
come 12:8 13:21 15:13 16:5 22:8,18 35:14 38:13,24 39:4 40:1,6 42:9 44:5
Comfort 36:18 37:16 37:17,21,22,23,24 38:17 40:13 41:1
comfortable 32:20
coming 4:15 6:2 36:9 46:3
comment 12:2,2,20,22 13:2,6 14:6 34:3,6 35:1
comments 3:15,21 4:12 11:8,9,15,17,17 11:21,22 12:3,6 13:4 34:1 35:11 42:16 45:20,25
commerce 37:10
Commission's 6:19
Commonwealth 7:15 10:16 20:5,10 22:6 23:1,5,14,23 24:16 24:18 25:1
Commonwealth's 21:2
communities 33:7
community 38:5,6,16 44:6
Company 46:9
compare 4:2
compared 21:25
comparison 5:21
complete 9:19 15:15 22:7
completed 12:2 22:11 22:22
completely 26:7
complex 20:10 21:6
complicated 32:13 44:19
component 11:6
computer 32:20 33:24 35:8
concentrate 27:23,23
concern 10:4 11:11
concerned 28:17 33:11 33:11
concerns 6:15,16 11:20,25
concluded 46:6
conditions 29:5,20
conference 35:21,25 36:15 39:4
congestion 9:9
connected 17:17
consequences 5:17
consider 11:10 14:3 19:19 34:9 37:4
considered 6:14 8:17 9:6 14:2 16:13,16 21:1,2 23:18
considering 20:16
considers 7:25
constitutes 47:10
consultants 4:10
contact 45:9,15
continue 17:6,10 27:2 38:5
continues 5:25
continuity 38:15 40:25
continuous 41:1
Convention 7:24
conveyance 21:4 24:3
conviction 36:16
copies 33:5 34:20 43:1
copy 33:22 34:2,21,22 43:6,22 44:21,25
Cornelissen 2:9 13:22 31:15,21 32:4
corner 44:4
Corps 3:10
correct 17:2 22:12 47:10
cost 13:1 45:2,3
Council 10:15
counterparts 26:9
couple 25:6 41:15
course 5:8
court 12:6,12 15:11 39:1,1 42:12 45:21 47:1
crack 39:25
create 44:1
creative 21:14,15,16
creek 23:18
criteria 8:11
critical 46:16
Crossen 3:14
crown 37:11
cultivating 40:19,21
cultural 8:21 10:5,6
cumulative 8:17 9:3 9:13,21
current 28:20 29:5
currently 15:19
customs 37:10
cutting 35:12

D

D 3:1
date 5:22
dates 11:4
Davis 36:23 37:2 38:18
dawn 39:25
day 29:16 40:17,18 41:2,13 47:7,12
days 45:12
De 38:9
dealing 25:23 27:12
deals 25:23
dealt 27:15
death 37:18
decision 6:20 11:3
Decisions 7:20
declared 17:16
deed 23:2
deep 39:10
definitely 33:4
DEIS 14:22 20:2 32:17 33:5 42:17
delineated 22:21
departing 25:5
depending 44:23
deposition 38:25
Depot 42:25
DEQ 34:21
describe 26:25
described 6:1 36:7
describes 5:18
describing 27:5
designated 7:17 24:9
detail 4:11 7:5 8:2,18 15:6
detailed 22:25
details 23:9 26:5,6
deteriorate 30:24
deterioration 9:8
determine 14:10 18:22 19:8,13
determined 5:9 17:4 19:9
develop 24:4,19
developed 7:22 25:17 25:20 37:5
developing 24:2
development 7:18 21:4 24:2
different 15:18 17:24 20:18,19 22:11,17 25:7,10
difficult 20:1,1 44:2,8 44:11
digest 32:18
digging 32:15
direct 8:16 12:11
directed 36:16
direction 17:13
directly 7:15 33:11 40:23
director 17:1 18:13 24:11
discuss 3:17 18:7
discussed 18:6
discussion 21:14
discussions 15:20
disposal 4:16 7:2,4,13 8:12,13 10:10 18:6 20:23 30:7,17
dispose 7:9
distance 37:23
distribution 33:2,14 38:7
district 3:10 8:7
division 27:21
document 5:12 6:2,9 11:9 20:11 27:8 32:17
documents 27:12 34:10 46:13
DoD 24:8,12
doing 4:3 14:9 24:22 25:1 45:3
done 14:23 19:3 26:18 28:25 29:25 30:3,6 30:12,16 31:1 35:18 43:1
Dorothy 2:16 35:19,22 35:24 41:24
down 6:4 12:19 18:10 36:8 38:3 39:2,11 40:14 44:16
download 33:24
downtown 33:9
draft 3:23,25 4:1,4,12 5:13,20,24 7:4 10:20 10:23 11:8,22,25 16:16 24:22 31:22
draw 5:4
drop 12:1
due 9:24
during 7:24
duties 37:10
D.C 3:5

E

E 3:1,1
each 6:1 8:12,15
earl 38:10,11,11
earlier 8:13 13:9 14:13
early 7:3 8:14 15:16 27:2 29:22 39:25 41:4
easily 8:11
easy 32:17
echo 42:16
economic 21:3 24:2,5 28:18
economically 17:8
Edwards 2:2 3:2,2 16:17,20 17:22 18:23 19:8,13,21 22:8,14 23:11,20 26:23
effect 9:14 29:3
effects 5:19 7:25 9:1,4 9:10,16,21 14:10
EIS 3:23,25 4:4,12 5:10,11,20,24 6:15 6:17 7:5,12 8:18 10:20,23 11:1,7,8,10 11:17,22,25 14:2,7 14:15 24:22 25:5 42:1 46:2
EIS's 4:1,2 7:25
Emancipation 43:18 46:10
employees 6:21
encompass 14:8
encouragement 36:5
end 4:21 13:8 18:17 26:11 35:9 36:18 39:13 45:19 46:10
endangered 16:12
ended 43:19
ends 10:22
enforced 37:10
Engineers 3:10
England 38:2,13,14
England's 37:13
English 37:8 38:22
enough 21:9
entire 24:23 30:1,8
entities 44:24
envelope 12:24
environmental 1:10 4:23 5:2,6,10,16 8:18 13:18 14:9,10 16:16 25:8,13,14 28:1,17 34:10
essential 10:11
essentially 29:20 30:14
essentials 10:8
esthetics 8:19
estimated 22:18
ES-6 14:7
ethos 36:17 37:6
Eustis 6:24
evaluate 8:2 25:8,12 25:18
evaluated 7:12
evaluates 8:18
evaluation 25:19
even 28:20,22 29:7 31:19 32:6,16 33:8 44:19 45:4
ever 41:21
every 26:12 27:5 29:13 33:19 38:16 44:22
everybody 3:6 12:10 13:24 23:25 28:9
everyone 4:15
everything 4:19 29:7 29:20 44:19
everything's 30:12
evidence 39:8
exactly 18:15 38:4 39:6,21
exception 10:5
excess 7:9
excited 39:5 41:9 43:20
Excuse 8:23
executive 16:25 24:11
expect 15:15
expected 9:4,11,20 33:25
expense 34:11
expert 26:19
explain 4:8 7:6 20:19 21:1 24:6 28:6,7
express 15:6
expresses 7:21
extend 17:18
extension 21:21

extent 14:2 39:3
extraordinary 39:10
e-mail 13:3,4 45:24,24

F

facility 35:2
fact 13:5 21:13 33:2
factored 9:13
factoring 28:18
FADA 3:12 16:21 17:1
fairly 22:17
families 38:8,14
famous 40:20
far 15:16 18:7 21:18 24:13 25:14 27:18 28:16 41:20
fascinating 41:7
fast 40:14
favored 38:8
feasible 8:10 28:23
February 11:2
federal 7:2,9,16,18 20:23 21:12,17,20 21:22 22:3,4 23:3,16 27:6,11,11,22 32:2,2
federally 24:14
FedEx 34:22 42:24,24
feel 46:11
FEMALE 19:11
fertile 40:22
Festival 43:17 46:9
few 39:17 45:12
field 41:4
fields 40:19,21
fighting 40:4
fill 12:22
final 6:15 11:1,10,17 11:21 46:2
fine 13:23
Finish 22:14
finishing 22:19
firing 14:25
first 17:4 22:16 36:22 40:7 44:6,6,17
fishing 25:9
five 5:13 6:1 23:6
fixed 14:25
flay 38:18
flexible 18:8
flimsy 36:6
flow 9:7
FMFADA 7:18,22 10:16 19:17 24:11 32:3
FMFADA's 8:1,10 10:8 33:21
fold 12:23
folks 44:16
followed 11:2
food 38:7 40:22
force 3:12
forced 37:11
forebearer 38:12
foregoing 47:9
forget 45:21,23
form 5:13 12:2,20
formal 13:9 45:19,20 46:6
formally 11:16 13:18 43:4
fort 1:9 3:3,12,18 4:7 4:16,23,25 5:6 6:20 6:23,23,24 7:1,10,11 7:17,21 8:3,4,6 9:4 9:24 10:4,11,20 11:13 14:24 15:5 16:10,12 17:1 20:23 22:24 25:6 26:25 28:13 29:9,21 30:20 32:6 33:12 36:3,22 37:1,8 38:12,22 39:7 39:9,15,17 40:10,12 40:23,25 41:17,25 43:20 44:3 46:15
forth 35:2 45:11
forts 36:3
fortunately 33:20 40:9
forum 13:16
Foster 3:9
found 8:25
founded 38:13
founding 39:17 40:10
four 8:12 11:19 12:1 18:5 28:7
fourth 44:3
freeze 29:13
from 3:2 5:4,11 6:23 7:13 14:25,25 15:5 16:21 20:8,9 29:4,5 31:9 33:8,22 34:1 35:7,7 36:1,9 37:5 37:20,23 38:8,22 39:20 40:25 41:1,1,5 41:8 42:5,10,11 43:10 44:11 46:5
front 12:15,16 13:21
full 22:23
fully 26:15
fumigate 30:11
fumigating 30:13
further 23:25 24:22 47:8
future 9:12 11:5 17:19 25:15,19,20 26:1 44:13

G

G 3:1
game 25:8
Garrison 3:11
gate 30:15
Gates 39:18
gather 5:11
gave 4:23 34:22
general 10:4
generate 17:7
gentleman 16:4
geology 8:20 10:5
George 38:9
gets 23:9
getting 13:2 26:23
give 4:10 6:2 19:25 23:15 35:10 38:25 42:23 43:14 45:7,8 45:15
given 20:9 47:12
gives 20:6 41:19
glad 14:18 41:16
go 4:6,20 14:15 17:13 19:18 20:14,14 21:8 29:9 30:4,8 31:1,5 33:24 39:13 45:10
God's 38:2
goes 27:19 34:12 38:17
going 4:10,11,17,20 13:19 15:18 17:7,12 17:13 18:11,17,20 18:22 19:1,5,17,25 29:1,25 30:10 31:1,5 31:11 36:1,13 37:4 39:4,13 41:6,10,11 45:13
gone 31:10
good 4:4 22:10 26:4 28:6 31:12 32:14 46:5
goods 40:22
gotten 37:2 39:5 41:9
government 37:12,25 39:14
government's 27:11
graphics 6:11 13:10
grateful 13:25
gray 16:11
grazing 29:6,7
great 20:12 22:25 38:14
greater 45:4
greatest 10:3
green 16:12 17:16 21:18 22:5 23:4
group 12:9 39:19
growth 9:6,13,15 28:18
guard 30:15
Guy 2:15 32:12,12 34:4,15 44:15
Guy's 42:16

H

Hampton 1:13 5:14 7:23 14:24 19:25 33:3,17,18 40:11 44:24 47:7
Hampton's 6:1
hand 7:7 16:4 42:8 47:12
handle 46:1
handling 20:15
handout 44:19
handouts 12:22
hands 13:19
happen 18:21 29:1 33:12
happening 33:12
happens 24:10
harbor 10:2 16:12
hard 22:8 33:14,22 34:2
hat 38:3
hauled 38:24
having 34:2 38:3 46:4
hazardous 8:23,24
head 36:24
hear 4:19,19 12:10 13:17 16:3,8,9 19:12 42:13 44:11
heard 11:24 35:16,17 42:17
heavily 22:1
heavy 40:9
Heiser 47:4,21
help 6:13 13:13 22:9 44:1,7 45:10
helpful 45:2
Henry 38:11
her 12:16,17,17 45:22
hidden 39:25
high 8:16 18:2 26:11
higher 8:2,9
highly 39:19
him 16:5 41:11
historic 8:7,9 10:9,14 10:15 32:13,24 44:4
historical 6:25 14:14
history 6:25 40:9,11 41:4 43:25 44:2,8,11 44:12 46:13,17
hold 25:16 35:11 40:25
holding 30:22
holds 28:16
hope 3:12 17:10 43:21 44:14
hoped 41:10
hopes 37:9
horribly 37:1
Hotel 36:2
house 30:9,11
housing 17:6
humdrum 31:22

I

idea 41:9
ideas 5:4
imagine 25:13,24 43:19
impact 1:10 4:16,23 5:10 13:18 14:22 16:16 25:12 34:10
impacts 8:17 9:24 25:8 25:13,14 28:1,17 29:9
implemented 5:17
implementing 6:21
importance 32:25 33:1
important 4:18 32:21 41:21 42:2,12
inaudible 15:10
INC 1:22
inch 38:16
included 6:14
including 6:25 11:10 37:14,15
increases 9:25
indeed 44:5
Indians 38:4 40:2,17 40:20
indicate 9:16
indirect 8:16
inform 5:15
information 6:19 41:25 45:9,15
infrastructure 9:11
injured 40:5,5
input 5:11 7:23 11:19
insight 46:5
installation 18:4 21:23 30:1,8,22 31:3,7
installations 4:3 30:20
instead 4:6
intensities 18:7
intensity 8:1,2,10,15 14:13 18:3,10,10 19:1,15
interest 3:9 35:20,25
interested 3:8 11:12
international 33:1
interrupted 15:11
introduce 37:8
investigation 15:19
investigators 36:7
invite 11:15 35:20,25 41:5,14
invited 6:7
involved 21:4 45:3
involvement 4:25 5:2 11:6
irrelevant 30:19
issue 31:8
issues 11:11
items 6:24

J

James 3:9 36:23 37:2
Jamestown 36:5 38:4 38:5,6
Joanne 2:17 42:11
job 14:9 20:12 26:21 28:3,6
John 3:14 36:25 37:18
July 39:24
Juneteenth 43:17,17 46:9,9
just 4:6 6:1,15 11:4 12:25 13:22 18:9,13 18:21 21:4 28:11,12 29:7,15 30:23 32:22 33:23,24 34:11,12 34:14 36:25 39:12

43:4,5,10,11 44:15

K

Kecoughtan 40:16,16
Kecoughtans 40:7
keep 10:9 36:9
keeping 27:8
Kelso 41:8
Kelso's 39:4
key 11:6
keys 30:14
kidnapped 38:22
killed 37:1 40:4
Kimberly 47:4,21
kind 26:17 31:25 36:18,19
knew 39:21
know 13:7,25 21:21 26:1,8 31:10 33:13 33:25 34:7,20 37:21 43:13 45:1,9,16
knowledge 47:9
known 26:7
Knox 6:24

L

La 38:9
land 8:19 19:14 20:4,7 20:8,9 21:10 23:14 25:19,20 27:4,6,9 29:23 40:22
Landmark 8:7
language 32:5
large 32:23
largely 5:7 36:16
last 4:22 28:2,5 34:21 40:15
late 33:13 44:17
later 14:18 38:24 39:17
law 31:17,18 32:5 37:9
least 10:6 33:16 45:19
leave 12:4 27:24,24 29:15
leaves 25:16
leaving 25:11,12
left 6:5 13:7 21:11,18 39:8 42:1
legal 30:22
legible 44:16
less 23:17 28:18
let 23:24 30:23 34:20 39:13 45:9,15
letter 12:24 41:8 42:19
let's 24:21
level 5:9 8:3,16 19:10 28:14,19
levels 8:1,15 30:25
libraries 5:14 6:1 33:3 33:16 43:7,14 45:1,7
library 33:4,9,10 34:19 42:18 43:23 44:21,22 45:11
licensed 23:2
lighthouse 37:22
like 3:3,6,7 4:19 11:21 12:23 13:16,21,22 14:6,14 15:5 16:14 20:3 21:10 29:15 30:9 31:2,3 33:20 35:1,14 36:8 41:15 42:3,9 43:21 45:7,17 45:20 46:1
likely 5:16
limit 28:20
limited 33:17
link 3:18,23 4:5,5
links 3:19
list 45:7
listed 8:8
listen 11:14
little 4:11 5:22 20:10 22:16 23:24 25:10 29:3 36:6,22 37:12 37:25 38:7 39:6 45:22
live 19:25
lives 40:7
living 6:22
local 7:17 24:9 30:3 31:17,23 32:2,4 43:25
located 9:23
locking 32:22
long 4:5 31:1 37:23 40:15
long-term 9:3,6,20 17:3 31:2
look 4:7 6:9 13:11 14:7,16 21:8 25:17 27:21 28:22,24 33:6 34:14 44:1,7
looked 26:10,11 27:19 28:13 36:8 41:3
looking 17:13 20:7 24:2 28:8 46:15
looks 21:10 31:3 41:15
Lord 38:9
lost 23:6 34:8
lot 3:7 6:19 20:2,20 23:17 32:15,19,21 33:10 44:18
louder 16:6
Louis 2:15 32:12 34:18 35:1 42:16,22
love 36:13 41:17
low 8:16 18:2,10 19:16
LRA 32:4

M

made 5:20,21 7:20 11:22 34:20
mail 12:20 45:24,25
main 45:1
mainland 39:16
mainly 22:18
maintenance 31:2
make 11:9 17:8 28:12 44:24 45:20
MALE 14:21 15:8,24
man 36:24
managed 33:22
many 8:7 12:9 22:16 33:23 36:15 40:4
map 21:10,17 22:11,16 22:17,20
marina 21:23
marine 14:22
maritime 37:4,5,9
Mark 2:11 16:19 17:2
marked 5:22
Marstel-Day 4:9 26:9
Martin 2:13 19:24,24 20:24 22:2 23:24 24:6,21,25 26:21 28:2,5 29:17 31:12
matter 31:24
maximum 26:10
may 9:7,10,16 12:21 33:12 34:6 39:15
maybe 33:8
ma'am 34:24 43:15
McConklin 38:13
mean 11:24 21:7 28:19 32:22 34:9 44:22
meaning 26:12
means 32:3
meant 37:11
measures 5:18
medium 8:16 18:2,10 19:1,5,15,16,19
meeting 1:8 4:15,22 6:18 10:18,23 11:23 12:12 19:10 35:13 45:18 46:19
memo 3:20 4:8
men 36:23 38:19 40:4
mental 36:25
mentioned 8:13 11:4 14:12,17 26:6 44:15 45:7
met 10:12
metes 22:6,11,23 23:10
microphone 12:9 35:23
middle 9:5,22 13:5 22:20
midway 6:8
might 33:8 39:7 41:17
mile 37:14
miles 37:15
military 6:22 10:1
Mills 2:14 21:16 22:4 22:13,15 23:8,12,21 24:4,7,24 25:4 27:18 28:4 32:9 43:6,9
mind 16:17
mine 34:22 35:13
minimal 25:13
minutes 41:11 42:5,6
mission 20:1
misspoke 32:1
mitigate 5:19
mixed 17:6,20 18:2,2
mixed-use 17:5
moat 14:23
moated 17:17
Mobile 3:10
model 44:9
modeling 9:12
moderate 9:3,21
Monroe 1:9 3:3,12,18 4:7,16,23 5:1,6 6:20 6:23 7:10,11,17,21 8:3,5 9:4,24 10:4,11 10:20 11:13 14:24 15:5 16:11,13 17:1 20:23 22:24 25:6 26:25 28:14 29:21 30:21 32:6 33:12 39:9 41:18 42:1 43:20 44:3 46:15
Monroe's 8:6
months 39:17
monument 32:24
more 4:11 15:6 29:3 34:8 41:10,21
morning 34:23
most 21:25 23:17 26:12 27:1,15
mothballing 31:3,7
move 30:5,9,10 41:12 44:10,12
moved 40:16,23
much 13:23 21:21 25:24 26:17,22 37:2 38:7 44:13
Muller 2:3 4:14 14:5 15:2,13,25 16:3,7,9 16:21,24 17:25 18:15,19 19:2,6,19 19:23 20:22 21:7,19 23:6 28:11 29:19 31:14,20 32:1,8,11 33:19 34:5,18 35:12 35:16,22 41:24 42:8 42:12,22 43:10,13 45:6
munitions 14:22 15:17 15:19
music 40:1
must 11:17
myself 39:23

N

N 3:1
name 3:2 11:23 16:18 19:24 43:16 45:8
named 37:20 38:12
nation 38:1 41:20 44:6
national 5:1 8:6,8 10:17 14:1,3,14 31:22 32:24,25
Naval 10:2
near 4:21 9:4 17:4,10 17:11,19
nearby 33:16
nearly 37:18
neat 4:1
necessarily 26:1
necessary 5:18 23:9
need 6:9,13 13:12 17:7 31:1 43:1,13
needed 34:21 40:24,24
needs 30:6
negotiations 24:13,15
neighboring 33:7
NEPA 3:19,19,25 4:8 5:2,5 6:21 10:19 25:20 26:19 27:14 27:19 28:22 29:13
net 28:16
Netherlands 39:20
networks 9:8,18
never 40:6
new 37:9,20,23 38:1
Newport 33:7
news 22:10,25 26:4 33:7
next 9:25
nice 35:4
nicely 35:18
night 46:5
ninth 38:11,11
noble 38:14
nobody 30:21
Nobody's 35:12
noise 8:20 9:2,20
None 28:13
Nonetheless 36:6
Norfolk 1:25 10:2,2 32:12 33:4 42:11,15 42:18 47:13
Norfolk's 33:9
north 21:21 37:15
northern 21:22
Northumberland 38:10
notably 6:24
Notary 47:22,23
nothing 28:23
Notice 10:20,25,25
notified 42:20
November 29:17,21
number 6:21 17:14
numerous 8:8

O

O 3:1
obviously 3:11 10:24
occupied 17:10 26:15 36:3,22
occur 7:14
ocean 33:3,10 36:11
October 1:12 4:21 5:24 10:23,24 11:18 36:4,20 39:18 41:1 47:7
off 3:23 5:6 33:24 34:10,15,16 35:12

38:24 42:25
office 12:16 33:23 42:25
Officer 10:15
often 21:9
oh 3:13 12:15 28:4
okay 15:7 16:7,8 21:19 22:14,15 24:6 29:24 30:9,11 43:13,14 45:6,17,18
old 22:17 37:15,17,22 38:17 40:12
once 25:16
one 3:17,22,22 10:3,6 10:7,18 12:3,7,21 17:17 20:16 28:2,5 32:10 33:4,22 35:6,6 37:14 38:9,9,14 40:12 41:13 44:25
ones 34:12
ongoing 15:3,15,20,21
online 5:12 33:20
only 9:25 13:6 14:23 20:22 23:15 33:17
open 17:16
operate 10:1
opinion 5:8 15:3
opportunity 4:24 13:10
option 14:1,3
options 17:14
organizations 6:23
original 36:24
other 4:1,2 6:24 11:12 20:17 26:9,23 28:9 28:25,25 30:20 33:7 41:21
others 40:4
otherwise 16:4
out 10:1 15:17 17:15 25:9 30:4,9,10,12,15 30:23 34:21 38:23 40:2
outlines 21:12
over 5:22 6:9 9:18,25 12:7,23 22:20 29:8 30:2,14,21 31:9 33:6 33:15 37:3,13 39:16 40:16,24 43:24
overall 5:3
own 23:14
owned 24:14
owns 20:7 23:3,16,22

P

P 3:1
page 3:18,23,24 4:1,7 14:7,8,8
pages 14:16,18 32:21
pain 44:10
painful 44:2
paper 34:12
parcel 19:14 29:23
parcels 27:4
park 10:17 14:1,3,14 14:14,14 17:16,19
part 4:24 22:22 24:25 45:19
particular 29:16 36:12
parties 10:13 11:12
partly 23:18
parts 24:25
party 40:3
pay 45:25
Peck 3:10
pencils 6:5
Pentagon 15:21
people 3:8 6:12 20:2 20:20 21:5 25:9 33:11 35:5 36:15,21 38:8,15,18 39:3,14 39:24 40:15,18,23 41:12 44:1,7,12
percent 17:15
Percy 38:9,11
perhaps 6:8
period 5:23 6:6 9:18 10:22 11:2 13:6
Perreault 2:11 16:1,6 16:8,10,19,19 18:13 18:16,20,25 19:4,7 19:22
personnel 6:22
phases 17:9
phonetic 38:19
pictures 35:3
piece 17:23 30:2,4,5
piecemeal 30:4
pieces 27:4,13
pile 34:13
pilot 38:22,23
pink 21:18 22:4
pirate 33:22
place 10:9 17:8 35:5 36:1 37:19 41:22
placed 39:7 42:18,20
Places 8:9
plan 7:23 8:11 10:8 16:13 17:2,9 25:17 26:4 27:24 28:21 29:10 33:21
planners 5:3
planning 8:9
plans 14:11
planting 40:18
plat 21:8
play 40:1
plays 44:1
please 13:5 15:7 16:4 31:16 34:20
pleasure 46:4
plowing 29:7
podium 12:11 35:14
point 13:8 14:25 30:3 30:16 36:18 37:15 37:17,21,22,23,24 38:17 40:12 41:1
poisoned 37:18
Policy 5:2
populated 22:1
population 26:17
Poquoson 33:8
pore 33:6
portion 20:4,6
Portsmouth 43:22 44:25
possible 31:10
possibly 14:2 18:18
post 16:2 24:20 26:12 27:19 32:23
posts 25:24
potential 9:1 17:18,18
precisely 39:16
predicted 27:20
predicting 26:10
predictions 26:2
preference 7:21
prejudge 19:5
prepared 5:14 28:15
presence 37:13
present 17:5
presentation 13:9
presented 6:18
Preservation 10:14,15 42:11,15
presumes 31:24
pretty 4:3 17:12 21:21
primary 20:16,22 25:5
print 33:24,25
printing 34:10,15,16
prior 11:18
priority 46:16
private 4:24 12:13 43:11
probably 18:11,17,19 27:14
proceedings 46:6 47:6 47:11
process 4:25 5:1,5 6:8 6:16 10:19 11:7 25:20 27:6,17 30:5 33:14
Proclamation 43:18 46:10
Professional 1:23 47:5
program 15:18
Programmatic 10:10
project 5:3 7:11
projected 9:15,18
properly 46:17
property 7:2,10,14,16 16:15 20:23 21:1,2 21:12,12,14,15,16 21:17,17,20,22 22:1 22:3,4,5,5 23:15 24:14,17,23 25:23 27:11,14 30:2
property's 30:16
proposed 5:15,16,17 7:9 8:1 14:11
protect 10:8 36:4 37:3
protected 35:5
provide 3:16,21 4:12 10:19 11:19 12:6
provided 12:22
providing 6:10
public 1:8 2:8 3:15 4:12,15,25 5:2,7,23 6:6 7:23 9:23 10:4 10:22,23 11:6,11 13:6 14:1 27:1 43:21 43:22 45:1 47:22
publicly 5:20
published 4:2 10:21 11:1
pull 12:14
pulled 12:15
purple 24:1
purpose 36:12
purposes 10:18 22:19
put 6:4 12:23,25 14:6 15:7 34:2,6,19 39:11 40:12,18 42:23 43:1 43:3,6 45:8
p.m 46:7,19

Q

quadrangle 44:4
qualified 15:3
quality 8:20
quarter 15:16 16:12 16:22 17:3 18:9
question 13:23,25 15:4 15:7,23 17:22 28:2,5 42:7,17
questions 11:9,15 12:4 13:15,15,17 32:14 32:16 45:25
quickly 45:12,14
quiet 15:4
quite 34:11 43:20

R

R 3:1
radio 35:17
raise 16:4
raised 11:11
ran 34:21
range 18:1 19:15
Ratcliffe 36:25 37:1
rate 21:20
rather 21:5 42:23 45:10
read 20:14 35:7,7
readily 7:6
reading 32:20
ready 30:1,4,8 39:5
real 35:3 37:22,22 41:16
realign 25:7
realize 45:12
really 15:3,21 18:8 21:8 23:21,22 25:22 27:21 31:6,9 35:7,11 37:2 41:10
reasonable 9:17
received 7:23 11:18 34:1
receiving 11:8
recognize 3:7 27:3
recognized 24:12,19 25:18
recognizing 27:9
Record 11:3
recorded 47:5
recovering 37:20
redevelopment 9:19 31:23,24 32:5,6
reduce 25:14
reflect 9:14
refuge 37:19
regard 15:16
regarding 6:16,19 10:4
region 43:24 44:22
regional 9:5,13
regions 37:14
Register 8:8
Registered 1:23 47:4
regret 33:2
regulated 37:10
regulations 6:20
relatively 26:7
release 5:22
relevant 11:13
relocating 6:23
remember 5:5 13:5 22:10 39:8
removal 40:17
remove 30:15
repeating 7:8
report 43:22 44:22
reported 38:21,21
reporter 12:7,12 15:11 42:13 45:21 47:5
Reporters 1:23
REPORTER'S 47:1
representing 46:8
represents 26:19
requested 34:2
required 5:1 29:23
requirement 3:5 28:22
requires 29:24
research 23:2
residences 9:23
resource 8:19 10:3,7
resources 8:20,21,21 8:22 10:5,6
respond 6:4 11:16
responses 6:10,14
responsibility 46:12
rest 23:23 44:9
restoration 30:6
result 9:4,7 28:16
resulting 7:13
results 5:3 9:14,15
returned 20:5
reuse 4:16 7:11,12,17 7:20,22 8:1,3,9,10 9:14 10:8,11 11:13 14:11,13 16:13 17:2

18:7 24:8,9,12,19 25:3,16,17,18 26:1,4 27:20,24 28:1 30:3 31:17 32:6 33:21
reused 7:22
revenue 17:7
reversionary 21:17,25 27:4,9,22
revert 7:15
reverting 43:20
reverts 22:5 23:1,4,13 23:23 24:17 25:1
review 4:10 5:23 6:2,6 6:8 10:22 33:20
Reyes 3:4
re-created 39:3
Riali 2:10 15:9,14
Rich 2:3 15:14 17:22 19:25 24:22 25:21 25:21 26:7,20
Richard 4:13
right 3:13,14,23 10:24 12:7,14,16 15:14 17:19 19:7,21 20:24 22:2 23:20 29:14,18 29:19 30:10 36:17 36:17 41:12
rights 27:10
rim 37:4,6
road 9:8
roads 7:24 9:24 14:24 44:24
roadway 9:8
Rob 15:13
Robert 2:10 15:9
Robin 2:14 21:14 22:8 22:12 28:12
role 44:9
rolled 6:17
room 6:12,14 12:3 13:10 21:8 22:20
round 29:13
Rouse-Bottom 2:16 34:25 35:15,19,19 35:24,24
route 4:20
RPR 47:21
run 42:25

S

S 3:1
sake 38:2
Sam 2:13 19:23,24
same 32:10 40:10,17 40:17
Saturday 36:1 41:5
Savannah 38:24
save 12:18
saved 40:7
saw 22:16
saying 18:19 19:2 20:25 34:18 35:1 43:4
says 12:3 27:1,25 31:23
scenario 19:20
scenarios 9:5,22
schedule 10:19
scholars 41:4,7
scope 16:14
scoping 1:8 4:22 6:16 6:16,18 11:23
screen 32:20
script 4:17
sea 37:15
seashore 37:14
seasoned 39:20
secondary 7:12 20:17 25:2,3,15
see 3:12 12:24 14:16 18:16 21:9 22:20 27:13 29:22 35:5 42:8 44:3 45:8
seeing 27:7,14 43:5
Seems 32:15
seen 11:22 12:21 38:25 39:23
selves 40:5
semigovernmental 24:10
send 33:15
sense 14:6 18:8
separately 20:8,9
September 5:21 7:10 10:21 31:10
served 36:9
service 10:17 45:24
serving 9:24
set 35:2
settlers 40:7
several 3:17
shack 30:15
shame 44:2,8
share 46:12
shared 46:17
sheet 13:5
Sheri 2:18 43:16 46:8
she'll 12:18
ships 10:1 36:10
shoals 38:23
shore 15:17
shoreline 21:24
short 42:14
show 44:12
side 12:24 21:23
signal 40:3
signed 10:9 11:3
significant 6:25 9:1,3 9:16,21
significantly 9:7
signing 43:18 46:10
since 14:24
sincere 31:6
sir 14:21 15:8 16:17 39:18
sit 12:14,16 33:5 45:21
site 3:25
sitting 12:7 38:2
situation 25:11 30:19
six 41:12
slavery 43:19 46:11
smaller 27:13
Smith 37:18
snapshot 29:14
Society 32:13
socioeconomics 8:22
soils 8:20 10:6
soldiers 39:19
some 6:10 9:8 13:12 20:18 21:22 26:6,15 30:22 31:6 32:25 33:15 34:20 39:3 41:3,25 45:8
someone 39:23
something 12:10 21:3 31:16 33:20,24 35:10
sometimes 16:12
somewhat 20:8
somewhere 31:22 35:4
soon 31:9
sooner 43:5
sorry 36:25 42:13
sought 37:19
Sounds 29:19
southern 37:16
southwest 21:23
sovereignty 37:13 39:14
Spanish 36:6,7 38:21 39:1
speak 12:9,12 15:21 16:6 35:14,16,22 42:10 45:17
SPEAKER 14:21 15:8 15:24 19:11
Speakers 2:8
specific 14:11 34:9
spectrum 5:4
speculating 39:6
speculation 19:17
speech 28:16
spoke 7:2 11:20
sponsored 4:22 36:15
spread 6:11
spy 38:21
square 38:16
staff 3:11
stamp 12:25
staple 12:25
start 38:4 39:5
started 5:6 24:17 37:2 38:1
starting 29:4,5
state 7:14 10:14 21:12 23:15
statement 1:10 4:17 4:23 5:10 13:18 16:16 32:7 42:15
states 10:14 27:10
stating 16:17
status 7:4 8:6,14 30:18 31:8
stay 35:4
stayed 39:15
stemmed 37:7
stenotype 47:6
step 24:21
Steve 13:20 31:14
Steven 2:9
stewardship 43:21
stick 4:17
still 6:3,5 15:3,15 21:14,15 27:3 42:5
stingray 37:19
stone 39:10
stop 39:12
storage 26:13
strike 18:23
strip 21:22
stronger 44:13
structure 37:25
structures 8:8
struggle 27:5
struggled 26:24 27:16
struggling 27:8
study 14:22 15:2,14,15
subject 11:5
substances 8:24
suggest 33:7
suggesting 34:5
suggestion 45:23
summarize 36:13
summer 7:24
sure 5:5 12:9 27:7 28:11,12 35:15 45:8
survey 22:6,12,19,21 22:22,23 23:10
surveyor 22:18 23:2
sustainable 17:8
sweet 40:1
symbol 37:25 39:13,14
symposium 37:4

T

tabaret 40:1,2
take 3:9 7:5 8:23 13:7 13:14 24:21 29:2,13 30:2,21 36:1 38:23 43:25 46:1
taken 41:22
takes 3:24,24 32:15
taking 28:19 31:9
talk 12:17 36:13,14,14 41:16 44:23 45:22
talked 25:21
talking 17:4,11 39:12
tall 34:13
TAYLOE 1:22
teaching 35:3
Telephone 1:24
tell 12:17 14:1,17 42:22
telling 4:6
tells 3:20
temporary 9:10
ten 38:19
term 17:4,11,11 31:19 32:9
terms 20:18 44:10,15 46:16
thank 4:14,15 14:4 15:1,24 16:20,24 19:22 21:19 26:21 28:3,4 31:12,15 32:14 41:23,24 43:12 45:5 46:3
Thanks 13:23 17:21 31:13
their 26:10 36:23 38:12 40:5,20
themselves 41:8
they'd 42:3
thing 26:23 29:6 30:22 30:24 36:6 42:4
things 20:19 25:7,9 31:5 36:21 40:13
think 17:12,22,23 20:2 20:20 23:7,8,25 27:1 29:17 31:16 32:8,9 33:9 34:11 37:5 41:5 41:14 42:17 43:4 44:21,23 45:3
Thomas 39:18
though 27:18 28:23 32:21
thought 41:24
thoughts 12:17
three 5:22 6:5 8:1,15 12:23 13:7 14:16,17 28:9
through 6:8 20:15 27:16 30:10 38:23 40:5 41:12
throwing 44:18
ticking 45:13
till 41:2 45:22
time 6:2,4 7:5 8:4 17:5 27:5 28:14 29:12 30:11 33:19 34:8 35:6 36:8 38:15,17 40:13
times 12:23 33:23
tiny 37:12
today 4:9 29:11
told 39:23 42:22
tomorrow 42:25
tonight 3:4,16,19 5:11 6:3,7 7:19 11:14 12:5 13:15 35:13 41:18 42:24 46:3
tonight's 10:18
tool 35:3
top 41:4
tore 40:13
totally 29:6 30:18
tourism 17:18
towards 15:22
toxic 8:23,24
trade 40:22

traditional 7:3 8:13 30:7,17
traffic 9:6,6,13,25
tragedy-ridden 40:11
trained 39:19
transcribe 12:18
transcribed 11:16
transcript 47:9,10
transfer 7:3 8:14 24:13 29:22,24 30:1
transferred 7:16 30:16
transportation 8:22 9:2,2,11,12,17
treasure 31:23
treating 26:25
tree 34:14
tremendously 45:2
trouble 12:18
true 28:16 31:18,24 32:7 47:10
trust 43:2
trying 26:25 27:25 42:4
turkey 38:3
turn 29:6 30:2,14
turned 36:10
two 8:23,25 12:8 27:3
type 14:13 18:3 19:2,3

U

under 18:1,1,5,7 47:12
understand 13:12 20:2 20:3,10,13,24 21:5 28:10 32:16 33:6 39:22 44:5 45:2
understandable 44:16
understanding 6:13
understands 24:1
understood 32:8
undetermined 16:14 17:23 18:14,24 19:9 19:14,16
UNIDENTIFIED 14:21 15:8,24 19:11
United 10:13
units 18:9
unlinked 36:19
until 30:8 37:18
update 16:22
upgraded 9:12
upgrades 9:17
upper 9:5,22
usable 23:17,21
use 8:19 16:13,15 17:3 17:6,20 18:2,2,3 19:1,3,5 21:10 25:19 25:20 26:11 28:20 31:18 40:2
used 27:11
using 20:18
utilities 8:22

V

value 6:25
vast 37:13
venues 3:17
verbal 12:6
verbatim 47:5
very 3:8 4:5 13:23 20:14 26:22 35:17 37:2 39:19,25 40:15 41:2,19,20 42:14
View 33:3,10
vines 40:18
Virginia 1:13,25 7:15 10:14,16 24:16 37:5 37:6 44:25 46:12 47:7,13
visible 5:20 37:25
visual 8:20
vital 10:9
voluntary 27:10

W

wait 29:25 30:8 43:3
waiting 11:2 45:11
walk 30:23
wander 35:5
want 4:18 12:10 14:17 21:5 27:2 34:19
wanted 40:12
wants 30:21
Warr 38:9
Washington 3:5
wasn't 33:23
waste 8:23
water 8:21
way 13:1 19:16 21:11 26:2 27:16 29:12 31:11
ways 3:17,22 11:19 12:1,8
web 3:18,23,24 5:25
website 4:4
week 34:7 36:1 41:5 43:3
weeks 5:22 6:5 13:7
welcome 3:3,6 4:14 15:2
well 18:1,5,12 20:22 21:7 22:21 23:8 24:18 28:12 29:7,8 34:14 45:19
well-known 38:8
well-traveled 33:16
went 36:10 38:18 39:10
were 3:13 8:17 22:22 34:6 36:20 38:20 39:3,20 40:4,6,18,20 40:22,23,24,24 44:18
wetland 22:19,21,22 23:19
we'll 3:17 18:23 46:1
we're 4:11,11,20 13:14 13:14 17:7,11,13,13 18:21 26:24,25 27:8 27:16,25 29:25 30:14,15 31:10 42:4 43:23,23
we've 30:20
what-have-you 25:10
Wherry 16:11,22 17:3 18:9
while 37:20
whole 21:13 27:1,9,18 27:20 29:6 30:23 32:15
wife 34:16
William 2:12 38:13
wind 18:11
window 11:7
wing 38:3
women 38:19,20
wondered 42:19
wonderful 26:21 28:3 35:3 41:8
woods 40:1,6
words 28:25
work 13:23
working 6:22 27:16
world 25:6 37:9 44:5 44:10 46:13,18
worst-case 19:19
wouldn't 30:13 41:18
wound 37:20
writing 12:19 20:12 42:19
written 11:16 20:11 39:2
wrong 20:13 31:16

Y

yeah 16:23 23:8,12,12
year 4:21,22 31:4
years 9:25 17:5,11 18:21
yesterday 34:23
youngest 38:10
you-all 27:15
you-all's 3:15

Z

zero 29:4

1

100 39:22,24
106 3:19 26:24 27:15
11 5:21 10:21
12 8:18,25 10:7
15 7:10 31:10
16 11:2
1609 36:4,20 39:18 41:1
1610 39:24
1611 38:20
17 44:23
1800 14:25
1800s 14:25
192 23:16

2

2 23:22 40:21
20 9:25 17:4,11 18:21 42:5,6
20-year 9:18
200 37:15
2005 29:17,21
2006 7:24
2009 1:12 10:23 47:7 47:13
2010 11:2,4 15:16
2011 7:10 20:6
22 44:23
26 5:24 10:23 11:18

3

3 23:22
3,000 40:21
3-15 14:8
30-day 11:2
372 23:13

4

4 41:1
4-98 14:8
40 17:15 36:23
44 13:1 45:25
44-cent 13:3
45 41:11
45-day 5:23 6:6 10:22 11:7 13:6
461-1984 1:24
464 23:11

5

564 17:15

6

6 1:12 10:24
6th 47:7

7

7 11:4
7107012 47:23
757 1:24

8

8:35 46:6

9

9 39:24 45:22
9:00 42:4 46:19

traditional 7:3 8:13 30:7,17
traffic 9:6,6,13,25
tragedy-ridden 40:11
trained 39:19
transcribe 12:18
transcribed 11:16
transcript 47:9,10
transfer 7:3 8:14 24:13 29:22,24 30:1
transferred 7:16 30:16
transportation 8:22 9:2,2,11,12,17
treasure 31:23
treating 26:25
tree 34:14
tremendously 45:2
trouble 12:18
true 28:16 31:18,24 32:7 47:10
trust 43:2
trying 26:25 27:25 42:4
turkey 38:3
turn 29:6 30:2,14
turned 36:10
two 8:23,25 12:8 27:3
type 14:13 18:3 19:2,3

U

under 18:1,1,5,7 47:12
understand 13:12 20:2 20:3,10,13,24 21:5 28:10 32:16 33:6 39:22 44:5 45:2
understandable 44:16
understanding 6:13
understands 24:1
understood 32:8
undetermined 16:14 17:23 18:14,24 19:9 19:14,16
UNIDENTIFIED 14:21 15:8,24 19:11
United 10:13
units 18:9
unlinked 36:19
until 30:8 37:18
update 16:22
upgraded 9:12
upgrades 9:17
upper 9:5,22
usable 23:17,21
use 8:19 16:13,15 17:3 17:6,20 18:2,2,3 19:1,3,5 21:10 25:19 25:20 26:11 28:20 31:18 40:2
used 27:11
using 20:18
utilities 8:22

V

value 6:25
vast 37:13
venues 3:17
verbal 12:6
verbatim 47:5
very 3:8 4:5 13:23 20:14 26:22 35:17 37:2 39:19,25 40:15 41:2,19,20 42:14
View 33:3,10
vines 40:18
Virginia 1:13,25 7:15 10:14,16 24:16 37:5 37:6 44:25 46:12 47:7,13
visible 5:20 37:25
visual 8:20
vital 10:9
voluntary 27:10

W

wait 29:25 30:8 43:3
waiting 11:2 45:11
walk 30:23
wander 35:5
want 4:18 12:10 14:17 21:5 27:2 34:19
wanted 40:12
wants 30:21
Warr 38:9
Washington 3:5
wasn't 33:23
waste 8:23
water 8:21
way 13:1 19:16 21:11 26:2 27:16 29:12 31:11
ways 3:17,22 11:19 12:1,8
web 3:18,23,24 5:25
website 4:4
week 34:7 36:1 41:5 43:3
weeks 5:22 6:5 13:7
welcome 3:3,6 4:14 15:2
well 18:1,5,12 20:22 21:7 22:21 23:8 24:18 28:12 29:7,8 34:14 45:19
well-known 38:8
well-traveled 33:16
went 36:10 38:18 39:10
were 3:13 8:17 22:22 34:6 36:20 38:20 39:3,20 40:4,6,18,20 40:22,23,24,24 44:18
wetland 22:19,21,22 23:19
we'll 3:17 18:23 46:1
we're 4:11,11,20 13:14 13:14 17:7,11,13,13 18:21 26:24,25 27:8 27:16,25 29:25 30:14,15 31:10 42:4 43:23,23
we've 30:20
what-have-you 25:10
Wherry 16:11,22 17:3 18:9
while 37:20
whole 21:13 27:1,9,18 27:20 29:6 30:23 32:15
wife 34:16
William 2:12 38:13
wind 18:11
window 11:7
wing 38:3
women 38:19,20
wondered 42:19
wonderful 26:21 28:3 35:3 41:8
woods 40:1,6
words 28:25
work 13:23
working 6:22 27:16
world 25:6 37:9 44:5 44:10 46:13,18
worst-case 19:19
wouldn't 30:13 41:18
wound 37:20
writing 12:19 20:12 42:19
written 11:16 20:11 39:2
wrong 20:13 31:16

Y

yeah 16:23 23:8,12,12
year 4:21,22 31:4
years 9:25 17:5,11 18:21
yesterday 34:23
youngest 38:10
you-all 27:15
you-all's 3:15

Z

zero 29:4

1

100 39:22,24
106 3:19 26:24 27:15
11 5:21 10:21
12 8:18,25 10:7
15 7:10 31:10
16 11:2
1609 36:4,20 39:18 41:1
1610 39:24
1611 38:20
17 44:23
1800 14:25
1800s 14:25
192 23:16

2

2 23:22 40:21
20 9:25 17:4,11 18:21 42:5,6
20-year 9:18
200 37:15
2005 29:17,21
2006 7:24
2009 1:12 10:23 47:7 47:13
2010 11:2,4 15:16
2011 7:10 20:6
22 44:23
26 5:24 10:23 11:18

3

3 23:22
3,000 40:21
3-15 14:8
30-day 11:2
372 23:13

4

4 41:1
4-98 14:8
40 17:15 36:23
44 13:1 45:25
44-cent 13:3
45 41:11
45-day 5:23 6:6 10:22 11:7 13:6
461-1984 1:24
464 23:11

5

564 17:15

6

6 1:12 10:24
6th 47:7

7

7 11:4
7107012 47:23
757 1:24

8

8:35 46:6

9

9 39:24 45:22
9:00 42:4 46:19

Fort Monroe Base Realignment and Closure
Environmental Impact Statement

Public Meeting Comment Sheet

Name:_____Date:_____
Organization You are Representing:_____ Self ❑
Mailing Address: _____City _____State _____ZIP_____
E-mail:_____Telephone:_____

Comments:_____

Please note:
The Public Comment Period Ends October 26, 2009
Submit your comment sheet at this meeting
OR
Fold/staple/stamp and return by mail

Thank you.

Fold, Staple and Stamp

- - - -

MARSTEL DAY
CONSERVATION & CONSULTING
FROM SEA TO STARS

Monday, November 09, 2009

Subject: PUBLIC NOTICE OF AVAILABILITY
Draft Environmental Impact Statement for Disposal and Reuse of Fort Monroe, Virginia

Library Staff,

Enclosed please find the Draft Environmental Impact Statement (DEIS) for the Disposal and Reuse of Fort Monroe, Virginia. Interested parties are invited to review and comment on this DEIS within 45 days of publication of the Notice of Availability (NOA). The NOA was published in the Federal Register on September 11, 2009; comments must be received by October 26, 2009. A request was made by the general public on October 6, 2009 to release the DEIS to additional libraries in the region; therefore, the DEIS is just now being sent to your library (libraries on the original distribution list are shown below). Please make these documents available to the public during the 45-day comment period. Checking out of these documents should not be allowed, as they must always remain available to members of the public during the review period. The public was originally informed that these documents would be available for review at the following locations:

Hampton Main Library	4207 Victoria Blvd. Hampton, VA 23669
Northhampton Branch Library	936 Big Bethel Road Hampton, VA 23669
Phoebus Branch Library	1 South Mallory Street Hampton, VA 23663
Willow Oaks Branch Library	227 Fox Hill Road Hampton, VA 23669
George Wythe Law Library	101 Kings Way, 2nd Floor, Hampton, VA 23669

In addition to the enclosed hard copy, an electronic version of the DEIS is also provided on the enclosed CD. The DEIS is also available on the Web at:
http://www.hqda.army.mil/acsimweb/brac/nepa_eis_docs.htm.

The DEIS provides an evaluation of potential environmental and socioeconomic impacts of the disposal and reuse of Fort Monroe, Virginia, in accordance with the National Environmental Policy Act and implementing regulations issued by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] 1500–1508), the Army (32 CFR Part 651), and the Office of the Secretary of Defense (Base Redevelopment and Realignment Manual – Department of Defense 4165.66M). The Army's primary action is to dispose of surplus property as a result of the closure of Fort Monroe under the Base Realignment and Closure mandate. Reuse of Fort Monroe by others is a secondary action resulting from disposal.

Questions and comments regarding this action must observe the October 26 deadline and should be addressed to: Ms. Robin Mills, Director, Directorate of Public Works, 318 Cornog Lane, Fort Monroe, VA 23651. Comments can also be sent to the following e-mail address: monr.post.nepapublic@us.army.mil.

Thank you for your assistance,

Rich Muller
Project Manager

enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

October 26, 2009

Ms. Robin Mills
Director, Directorate of Public Works
318 Cornog Lane
Fort Monroe, VA 23651

Re: Draft Environmental Impact Statement for Fort Monroe US Army Garrison Base Realignment and Closure (BRAC) 2005 Disposal and Reuse of Surplus Nonreverting Property, Fort Monroe, VA (CEQ #20090317)

Dear Ms. Mills:

In accordance with National Environmental Policy Act (NEPA) of 1969, Section 309 of the Clean Air Act and the Council on Environmental Quality regulations implementing NEPA (40 CFR 1500-1508), the U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement for BRAC 2005 Disposal and Reuse of Fort Monroe, Virginia.

The purpose of the proposed action is to carry out the 2005 BRAC Commission's recommendations. The Department of the Army (Army) is obligated under the Base Closure Act to transfer the excess nonreverting property to new owners. Fort Monroe encompasses 570 acres. Approximately 290 acres of "reverting property" will pass from the United States to the Commonwealth of Virginia. Approximately 280 acres are considered "nonreverting property" which is lands that do not pass directly to the Commonwealth of Virginia. The EIS analyzes the disposal of nonreverting property while evaluating the impacts of closing the installation and considering reasonable reuse alternatives.

Two disposal alternatives are identified in the EIS for the nonreverting property (Early Transfer and Traditional), as well as the Caretaker Status Alternative (which might arise if disposal of BRAC properties were delayed prior to disposal), and the No Action Alternative. Under the Early Transfer Alternative, the Army has available various property transfer and disposal methods that allow the reuse of the property to occur before environmental remedial action has been completed. This method of early disposal allowable under the provision of Section 120 (h)(3)(C) of CERCLA, would be to defer the requirement to complete all necessary environmental cleanup prior to the transfer of the property and parcels could become available

Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free.
Customer Service Hotline: 1-800-438-2474

for redevelopment and reuse sooner under this disposal alternative than under any other. Under the Traditional Disposal Alternative, the Army would transfer or dispose of property once environmental remediation is completed for individual parcels of the installation.

In addition to disposal alternatives for the proposed action, three reuse intensities are evaluated as secondary actions on nonreverting property to be disposed; they are the Lower Bracket Scenario, the Middle Bracket Scenario and the Upper Bracket Scenario. The Lower Bracket Scenario would be commensurate with current baseline conditions with respect to building intensity, but with the added effect of a recreational tourism destination (e.g., beaches, open space, military museums, historic structures, accommodations, and amenities). The Middle Bracket Scenario would be commensurate with reasonable long-term execution of the Fort Monroe Federal Area Development Authority (FMFADA) Reuse Plan. Although there would be infill and expanded development under this scenario, principally for residential and lodging construction, the intensity of reuse would still be commensurate with the medium intensity reuse (MIR) scenario with a floor area ratio (FAR) of 0.25 (based on combining existing structures, new office/retail/commercial structures, and new residential development). The Upper Bracket Scenario would be slightly more intense than the reuse proposed by the FMFADA, but still within a medium intensity of reuse (FAR of less than 0.3 when combining existing structures, new office/retail/commercial structures, and new residential development).

Although a preferred disposal alternative was not selected within the DEIS, EPA questions whether the Early Transfer Disposal Alternative is a viable alternative since there is still ongoing investigation work to be conducted in 2009 and 2010 resulting from nonconcurrence to the Community Environmental Response Facilitation Act (CERFA) Report by the Virginia Department of Environmental Quality (VDEQ) as a result of perceived data gaps.

Additionally, the DEIS states (on page 3-1) that "The Army expresses no preference with respect to reuse scenarios because decisions implementing reuse will be made by other entities." The purpose of the analysis is to provide data to help decision makers choose the best reuse alternative, and the Army can interpret its analysis to recommend the best scenario suitable for the site. Considering that Fort Monroe is a barrier island on a 100-year floodplain with extensive historical significance, it would seem reasonable that the Lower Bracket Scenario which is most compatible to existing land use conditions would be most conducive to the preservation and protection of the natural and historic resources on Fort Monroe.

Based on our review, EPA has rated the environmental impacts of the DEIS an "EC-2" (Environmental Concerns/Insufficient Information), which indicates that we have environmental concerns regarding the proposal and that there is insufficient information in the document to fully assess the environmental impacts of this project. A copy of the EPA's rating system is enclosed for your information. The basis of this rating is the concerns with hazardous and toxic substances, floodplains, stormwater management, water resources, and terrestrial habitat. Specific comments are addressed in the enclosure.

Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free.
Customer Service Hotline: 1-800-438-2474

Thank you for the opportunity to review and comment on this project. If you have any questions regarding these comments, please feel free to contact Karen DelGrosso, the staff contact for this review, at 215-814-2765.

Sincerely,

Barbara J. Rudnick
NEPA Team Leader
Office of Environmental Programs

Enclosures (2)

Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free.
Customer Service Hotline: 1-800-438-2474

EPA Region III Comments on DEIS BRAC 2005 Disposal and Reuse of Fort Monroe, VA

Hazardous and Toxic Substances

As discussed in Sections 3.2.3 and 4.13.1, the Army is required under CERCLA, as amended by Community Environmental Response Facilitation Action (CERFA) to identify uncontaminated property/parcels within 18 months of the date the property is selected for closure. The Army has categorized parcels through the analysis documented in the 2006 Environmental Condition of Property (ECP) Report for Fort Monroe. The CERFA Report, which identified the uncontaminated properties, was submitted to the regulatory agencies on January 10, 2007. The Virginia Department of Environmental Quality (VDEQ) did not concur with these designations due to perceived data gaps that the agency believed existed. Supplemental studies and investigations were initiated and a Draft Site Investigation Report was published in February 2008. Additional investigation work is being conducted in 2009 and 2010.

Because investigations are still underway and uncontaminated parcels have not been identified and agreed upon, it is not feasible to consider the Early Transfer Disposal Alternative. Until further site investigation is complete and designations determined, it is difficult to consider the Early Transfer Alternative therefore to remain within the context of the DEIS timeframe, it would be prudent to look only at the Traditional Disposal Alternative.

Floodplains

As stated on page 4-61, "According to the Federal Emergency Management Agency, Fort Monroe is located entirely within the 100-year floodplain, with the majority of Fort Monroe classified as having flood levels ranging from 9 to 10 feet." How has this information impacted the Reuse Plan since housing/residential communities planned would be at a significant risk?

Soils/Stormwater Management

Page 4-55 states that, "Many areas of Fort Monroe contain dredge-fill material." "The coastline soils at Fort Monroe are combinations of sand, silt, and clay of the Yorktown Formation that are subject to considerable erosion." Under the Middle Bracket Scenario up to 85 acres may ultimately be disturbed from redevelopment spread over the course of 20 years increasing impervious surface will increase from 24 percent (baseline conditions) to up to 27 percent at full build-out. The Upper Bracket Scenario will disturb 100 acres of land over the 20 year build-out period increasing impervious surface to 28 percent of the buildable area surface (4 percent above baseline).

Considering soil type and increased impervious surfaces proposed could adversely impact soil erosion, EPA questions whether there are best management practices suitable for the unique characteristics of the island and suggests that they be mentioned and addressed in the FEIS.

♻ ***Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free.***
Customer Service Hotline: 1-800-438-2474

Water Resources

Page 4-62 mentions a new seawall and breakwater project but it does not mention the status of this project. Is it in progress, is it complete? If it is underway, the cumulative impacts of this project need to be addressed. Other pertinent information should be provided, such as location, size, purpose, environmental impacts, etc. Is this project addressed in another environmental document?

Also mentioned within this section on the same page, is that a marina expansion is planned, but no information was provided in the DEIS. Again, EPA is concerned with the cumulative environmental impacts and questions whether this project will be addressed in another environmental document.

Beach Nourishment

Page 4-103 states that under the Middle Bracket Scenario, "A northern connection between Fort Monroe and Buckroe areas may be constructed and beach nourishment along the Chesapeake Bay shoreline may occur. Following the PA, such construction would be beneficial to the Historic District by restoring the shoreline and enhancing the feel of the fort." The text should quantify to some degree the extent of this proposed project to consider environmental impacts. Also, it should be stated whether future environmental documentation would result for this proposed project.

Wetlands/Terrestrial Habitat/Aquatic Resources

Page 4-21 states that, "With the Middle Bracket Scenario, there would be a 5 percent (15 acres) loss of open space and one percent loss of natural areas and their respective viewsheds in comparison to the baseline condition and results in a minor long-term adverse effect." Page 4-177 states that, "Development will physically eliminate or diminish the character of highly disturbed natural resources on up to 25 acres of open green space and limited river bottom habitat for the construction of up to 5 docks." The DEIS should identify and quantify the types of natural resources impacted and lost. The impacted areas should be described to have a better understanding of the specific impact/loss.

The DEIS states that if the northern entrance were to be constructed in the future, then up to one acre of wetland habitat may also be disturbed. The FEIS should describe the wetlands that may be impacted.

Page 4-68 states that, Fort Monroe has close to 650 oak trees, 500 of them being "live oaks." "The Fort Monroe area is the northern-most habitat of live oak and several specimens on the installation are believed to be over 400 years old." Will the reuse alternatives impact the historic trees? The FEIS should identify and quantify the impact to terrestrial habitat, if any.

Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free.
Customer Service Hotline: 1-800-438-2474

COMMONWEALTH of VIRGINIA
DEPARTMENT OF TRANSPORTATION
1700 North Main Street
Suffolk, VA 23434
VirginiaDOT.org

DAVID S. EKERN, P. E.
COMMISSIONER

January 9, 2009

Ms. Robin D. Mills
Director of Public Works
318 Cornog Lane
Fort Monroe, Virginia 23651

Dear Ms. Mills:

The following are the Virginia Department of Transportation's (VDOT) comments on the Fort Monroe traffic study approach and assumptions presented by Kimley-Horn on December 12, 2008. VDOT strongly encourages the Army to modify its Fort Monroe Environmental Impact Statement traffic study to reflect these comments and concerns.

1) Please provide land use types and densities for each zone listed in the Trip Generation Summary.

2) Please have FMFADA confirm the proposed land use types and densities for each zone are consistent with the latest reuse plan/maximum build out of Ft. Monroe.

3) If the Army's analyses of the I-64 on/off ramp termini indicates operational/capacity problems, please indicate how the Army will determine the impact these problems will have on the operational/capacity of mainline I-64.

4) The internal residential capture is greater than typical standard VDOT rates. Please provide additional justification for use of the 20% rate.

5) Please provide information on how the peak hour of existing Ft. Monroe uses relate to the existing peak hour on the existing street network. Will the proposed reuse shift the peak hour of traffic generated from/to existing Fort Monroe? What efforts will be made to determine the peak hour spreading that may occur?

6) VDOT continues to believe the proposed traffic study does not meet the requirements of NEPA since impacts to I-64 mainline and interchanges are not being studied. The additional 909 PM peak hour trips generated by the re-use plan represent approximately one-half a lane of capacity on the interstate. This is significant and should be studied with proposed mitigation strategies developed as part of the EIS/ROD.

7) There are no objections to your tourism trip generation summary (proposed); however, in the distribution assumption you assume that a majority of trips will use I-64 to Mallory to enter the site, yet you assume that less will exit the site using I-64 at Mallory. It should be assumed that tourist trips will enter and exit the site at the same point.

8) Concerning the background traffic growth noted on slide 37, we concur with the Mallory Street numbers as they agree with the 2030 forecasts. The Woodland forecasts in the 2030 LRP are much higher than those presented in the preliminary data. The Pembrooke and Settlers Landing forecasted numbers show an increase in the growth rate versus the decrease provided in the preliminary data.

9) In the monthly assumptions you note that all culture and history have the same number of trips. Would summer trips also be higher with this assumption? (slide 14)

10) VDOT requests the Army provide formal responses to these comments as soon as possible.

Consider this letter as a formal request for a written response to each comment as soon possible.

Please contact Mr. Eric Stringfield at (757) 925-3669 or Mr. Tom Fahrney at (703) 383-2489 should you have any questions.

Sincerely,

Dennis W. Heuer, P.E.
District Administrator

RECEIVED
NOV 04 2009
DEQ-Office of Environmental Impact Review

COMMONWEALTH of VIRGINIA

L. Preston Bryant, Jr.
Secretary of Natural Resources

Marine Resources Commission
2600 Washington Avenue
Third Floor
Newport News, Virginia 23607

Steven G. Bowman
Commissioner

October 8, 2009

Ms. Robin Mills, Director
Directorate of Public Works
318 Cornog Lane
Fort Monroe, VA 23651

RE: Draft Environmental Impact Statement for Disposal and Reuse of Fort Monroe

Dear Ms. Mills:

This will respond to your request for comments regarding the Draft Environmental Impact Statement for Disposal and Reuse of Fort Monroe.

Please be advised that the Marine Resources Commission, pursuant to Section 28.2-1204 of the Code of Virginia, has jurisdiction over any encroachments in, on, or over any State-owned rivers, streams, or creeks in the Commonwealth. Accordingly, if any portion of the subject project involves any encroachments channelward of ordinary high water along natural rivers and streams, a permit may be required from our agency.

Please do not hesitate to contact me at (757) 247-8027 if I may be of further assistance.

Sincerely,

Elizabeth G. Murphy
Environmental Engineer

EGM/lra
HM

FMFADA
FORT MONROE Federal Area Development Authority

Old Quarters #1 ■ 151 Bernard Road ■ Fort Monroe, VA 23651
757.637.7778 ■ fax 757.637.7776
www.fmfada.com

October 26, 2009

Ms. Robin Mills
Director, Directorate of Public Works
318 Cornog Lane
Fort Monroe, VA 23651

SUBJECT: Comments on the *Draft Environmental Impact Statement for BRAC 2005 Disposal and Reuse of Fort Monroe, Virginia* dated August 2009 prepared by the U.S. Army

Dear Ms. Mills:

The Fort Monroe Federal Area Development Authority (FMFADA) is pleased to transmit our official comments on the subject Draft Environmental Impact Statement (*Draft EIS*) to the U.S. Army for consideration. We would like to commend the U.S. Army on their preparation of this comprehensive *Draft EIS*.

The FMFADA is committed to the economic viability and - sustainability and responsible development that will enhance the Fort Monroe community. The preservation of historically significant landmarks for the enjoyment of future generations can only be achieved with responsible reuse. During the implementation of the Fort Monroe Reuse Plan, we acknowledge that that the impacts identified in the *Draft EIS* could occur at the site over time. The potential transportation and noise impacts identified in the *Draft EIS* are recognized by the FMFADA and efforts will be made to manage these impacts during the implementation of our Reuse Plan. However, there will also be beneficial socioeconomic impacts to the community, specifically to the local and regional economy. Using the resources available, FMFADA will work closely with the relevant stakeholders and appropriate governmental agencies to resolve the conflict between the various competing goals and simultaneous pursuit of historic preservation, public programs, economic prosperity and environmental quality.

In closing, the *Draft EIS* appears to address the environmental and socioeconomic impacts of closing Fort Monroe and transferring the property, and we appreciate the enormous effort that went into developing this document. The reuse alternatives in the *Draft EIS* were based on probable use scenarios and appear to be both consistent with the land uses and sufficiently bracket the potential growth identified in the Fort Monroe Reuse Plan. Specific comments that we wish the U.S. Army to consider during the development of the Final EIS are included in Attachment 1 to this letter.

Should you either have any questions or require additional information, please contact me at (757) 637-7778.

Sincerely,

Fort Monroe Federal Area Development Authority

William A. Armbruster
Executive Director

WAA/jfb

Attachment (1): Matrix Environmental Services, LLC letter to the FMFADA dated October 21, 2009

Copy: Colonel Anthony Reyes, Fort Monroe Garrison Commander
Honorable Preston Bryant, Commonwealth of Virginia, Secretary of Natural Resources
Mayor Molly Ward, City of Hampton
Mr. Jim Oliver, City of Hampton
Mr. Frank Roberts, Hampton Roads Military and Federal Facilities Alliance

Matrix Environmental Services, L.L.C.
Integrated Environmental Solutions

1601 Blake Street, Suite 200
Denver, Colorado 80202
(303) 572-0200 Tel
(303) 572-0202 Fax
www.matrixenvironmentalservices.com

October 21, 2009

Mr. Bill Armbruster
Executive Director
Fort Monroe Federal Area Development Authority
151 Bernard Road, Old Quarters #1
Fort Monroe, Virginia 23651

SUBJECT: Comments on the Draft Environmental Impact Statement for BRAC 2005 Disposal and Reuse of Fort Monroe, Virginia dated August 2009 prepared by the U.S. Army

Dear Mr. Armbruster:

As requested by the Fort Monroe Federal Area Development Authority (FMFADA), Matrix Environmental Services, LLC (Matrix) has conducted an independent review of the *Draft Environmental Impact Statement for BRAC 2005 Disposal and Reuse of Fort Monroe, Virginia (Draft EIS)* dated August 2009 prepared by the U.S. Army. First and foremost, we would like to commend the U.S. Army on their preparation of this comprehensive and thorough *Draft EIS*. Pursuant to our discussions, and discussions that you and I had with Mr. Steve Owens of the Commonwealth's Office of the Attorney General, our review focused on the completeness of the document, the reasonableness of the methodology used to conduct the National Environmental Policy Act (NEPA) analyses on the twelve resource areas evaluated in the *Draft EIS*, and the significance of the mitigation and management measures proposed by the U.S. Army in the document to the FMFADA. Our findings are provided below.

1. The *Draft EIS* appears to adequately address the environmental and socioeconomic impacts of closing the installation and disposing of the property.
2. The reuse alternatives in the *Draft EIS* were based on intensity-based probable use scenarios and appear to be both consistent with the land uses and sufficiently bracket the possible densities identified in the FMFADA's Reuse Plan.
3. The disposal and reuse alternatives were evaluated by resource area to determine the direct, indirect and cumulative impacts. The methodology used for the evaluation of each resource area is consistent with standard practice.
4. Of the twelve resource areas considered in the *Draft EIS*, only transportation and noise are expected to have significant adverse effects. Although mentioned in the *Draft EIS*, we believe it should be emphasized that the adverse effects noted in the *Draft EIS* will occur gradually over time during implementation of the Reuse Plan, with the maximum significant adverse effects projected to occur approximately twenty years from closure (i.e., in calendar year 2031). In our professional opinion, it would be very useful and beneficial to both the U.S Army and the FMFADA to clarify and emphasize this point, particularly in the Executive Summary of the EIS.

5. In accordance with NEPA, when significant adverse effects are identified in an EIS, potential measures to mitigate the adverse effects or impacts to a less than significant level must also be presented or proposed. In the subject *Draft EIS,* two types of potential measures to mitigate adverse effects are presented: mitigation measures and management measures.

a. *Mitigation measures* are those specific measures, encumbrances, and/or conditions that while the property is under their control, the U.S. Army (i.e., the lead agency with signatory authority for this EIS) imposes on the property into perpetuity to lessen adverse impacts, typically as a result of a statutory requirement. The mitigation measures that the U.S. Army has committed to for Fort Monroe stipulated in the Section 106 Programmatic Agreement between the U.S. Army and other federal and state entities related to cultural resources would typically fall into this category.

b. *Management measures* are those specific measures that could be used in the future when the property is no longer under the U.S. Army's control to lessen the adverse impacts identified in the *Draft EIS*. Management measures are not required by federal, state, or local laws and policies, and are merely suggested actions that a future property owner (i.e., the FMFADA) or affected stakeholders (i.e., the City of Hampton and/or the Virginia Department of Transportation [VDOT]) may take. Management measures suggested in the *Draft EIS* which are of significance to the FMFADA and which could be used to compliment governmental regulations and policies to reduce or avoid adverse effects as reuse occurs are discussed in more detail in Comment Number 6.

6. *Management measures* to reduce the significant adverse effects identified in the *Draft EIS* have been recommended for both traffic and noise. The transportation recommendations all pertain to external street intersections, and therefore are of indirect significance to the FMFADA, but of direct significance to the City of Hampton and VDOT. The proposed noise abatement management measures are of direct significance to the FMFADA, and do not constitute a requirement for construction at Fort Monroe, but could achieve some benefit if used. Before voluntarily agreeing to any of the management measures presented, we strongly recommend further analyses and collaboration with other project stakeholders, as appropriate, to determine the viability and effectiveness of the proposed measures.

7. In our professional opinion, the information used by the U.S. Army to establish the baseline conditions for certain resource areas evaluated in the *Draft EIS*, specifically the information included in Section 4.5 (Noise), Section 4.12 (Utilities), and Section 4.13 (Hazardous and Toxic Substances), is out of date. That being said, we acknowledge that the information presented is meant to be representative of a snapshot in time and while more current information is available for both utilities and hazardous and toxic substances, the use of that information would not change the outcome of the NEPA analyses for those particular resources areas (i.e., the outcome would still show that both minor adverse and beneficial effects would occur as a result of the closure and reuse of Fort Monroe). We do, however, have a concern related to the assumptions used to establish the baseline noise condition presented in the *Draft EIS*. For the purposes of this document, the U.S. Army has assumed that the results of a 1984 noise measurement field study conducted by the Army Environmental Hygiene Agency are representative of the noise levels currently experienced at Fort Monroe. In follow-up to Comment Number 6 above, before implementing any of the management measures recommended in Section 4.15.4 of the *Draft EIS* during reuse, we would recommend that the FMFADA conduct additional noise monitoring to validate the acceptability of the previous work and to determine the viability and effectiveness of the proposed measures.

8. In the approved FMFADA Reuse Plan (2008), the construction of a northern roadway connection to the Buckroe area is recommended. With respect to the *Draft EIS* and the northern roadway connection, we have the following two specific comments.

   a. In the *Draft EIS* on page 4-85, lines 25-27, a statement that could be considered contradictory to the recommendations presented in the approved FMFADA Reuse Plan is attributed to a FMFADA employee. Based on our conversations with the FMFADA

employee, we believe the information that was relayed was misunderstood by the U.S. Army's contractor and recommend that this statement be removed in the Final EIS.

b. If the northern roadway connection is constructed at some point, it is highly likely that wetlands habitat would be disturbed. To minimize impacts to this sensitive resource, project-specific wetlands delineation, permitting, and consultation will be required prior to design and construction. We recommend that this wetlands consultation work be initiated as soon as feasible in the development of preliminary alignments for the roadway connection to minimize future potential schedule and cost impacts to the FMFADA and other project stakeholders.

Bill, we appreciate the opportunity to work for the FMFADA and look forward to our continued work with you, your staff, and the U.S. Army on this challenging project. As always, if you have any questions or would like to discuss the information presented herein further, please call me at (303) 572-0200 (office) or (303) 549-5995 (mobile).

Sincerely,

Matrix Environmental Services, L.L.C.

Julie A. Carver, PE
Project Manager

Copy: Mr. Steve Owens, Commonwealth of Virginia, Office of the Attorney General
Mr. Rick Weeks, Commonwealth of Virginia, Department of Environmental Quality
Mr. David Knisely, Garrity & Knisely, LLP

Matrix Environmental Services, LLC. 2009©

City Manager

October 23, 2009

Ms. Robin D. Mills
Director, Directorate of Public Works
318 Cornog Lane
Fort Monroe, VA 23665

RE: Draft Environmental Impact Statement for Disposal and Reuse of Fort Monroe

Dear Ms. Mills:

We appreciate this opportunity to provide the City of Hampton's comments on the draft Environmental Impact Statement for Fort Monroe. We acknowledge the significant level of effort required to identify and evaluate the potential environmental impacts associated with the disposal and reuse of the Fort. The draft document appears to have both the comprehensive scope and a sufficient level of detail to provide a thorough assessment of the Army's pending disposal of the property and the plans for reuse as envisioned by the Fort Monroe Federal Area Development Authority.

The City of Hampton has a great deal of interest in the process of closing this installation and the ultimate future reuse of the property. As stated in the Hampton Community Plan (2006):

> *Fort Monroe has a very significant economic, historical, and cultural presence within the nearby community, the city and the Hampton Roads region. The Fort is also a National Historic Landmark and is listed on the National Register of Historic Places. Identifying the Fort as one of the strategic investment areas in the Community Plan will support the City's efforts to ensure that the Fort remains a positive presence within the community.*

It is with this interest in mind that the City has reviewed the draft EIS and has prepared the attached comments. We look forward to working with you to address these comments and making any changes to the draft EIS that may be warranted. Please contact me or Bruce Sturk in the City Manager's office or Keith Cannady in the Planning Department if you have any questions or if you need any additional information.

Sincerely,

James B. Oliver, Jr.
City Manager

CITY OF HAMPTON (757) 727-6392 FAX (757) 728-3037
22 LINCOLN STREET, HAMPTON, VIRGINIA 23669

"Oldest Continuous English-Speaking Settlement in America - 1610"

Ms. Robin D. Mills
RE: Draft Environmental Impact Statement for Disposal and Reuse of Fort Monroe
October 23, 2009
Attachment

City of Hampton Comments

1. Page 4-85, line 26 – 28. Consider removing statements referring to the likelihood of constructing a northern entrance to the property. As noted on page 4-85, the proposed access road is included in the Fort Monroe Reuse Plan adopted by the FM FADA. This access is also referenced in the City of Hampton's Buckroe Master Plan (2005).

2. Page 4-114, line 30. References to economic impacts here and at a number of other locations in this section of the document note that "these effects would largely be localized, would not effect the ROI (region of influence) equally". This assessment appears to potentially diminish or underestimate the negative economic impacts on the local community. While the region as a whole may suffer negligible economic impacts, it appears that impacts to the local community may be significant. Consider revising this section of the document to provide a more complete assessment of these impacts.

3. Page 4-137, line 4 – 6. In the late 1990's the City completed several streetscape projects on Mallory Street from I-64 to County Street and on Mellen Street from Mallory to the Mellen Street bridge. The project included such features as curb bulb outs, raised crosswalks, and medians. The City will not be undertaking any future projects to convert Mallory Street or Mellen Street into 4-lane roadways. As such, it will not be geometrically possible to create dual northbound left turn lanes on Mellen Street to turn on to westbound Mallory Street.

4. Page 4-137, line 7 – 8. We are in agreement that the addition of an exclusive southbound left turn lane (on I-64 westbound off-ramp to Mallory Street) and addition of a westbound right-turn lane on Mallory Street would improve traffic operations at this intersection. The length of the right turn lane may be very minimal without significant impacts to the business at 236 S. Mallory Street.

5. Page 4-137, line 9 – 10. This is a one lane VDOT controlled off-ramp. The primary existing turning movements are left turns. This recommendation should be reworded to clearly indicate that the existing one lane ramp will need to be widened to accommodate three lanes (dual left turn lanes and one right turn lane).

6. Page 4-137, line 11 – 14. This recommendation should be reworded to clearly identify that the I-64 eastbound off-ramp (which is actually identified as Settlers Landing Road) is to be remarked for 2 left turn lanes, one thru lane, and a shared thru/right lane

7. Page 4-137, line 15 – 17. The City has an ongoing traffic signal timing program and continually updates timings every 3-4 years to reflect current conditions in corridors. The lack of sufficient capacity at the eastbound approach of the Hampton Roads Bridge Tunnel, especially during weekday AM and PM peak hours as well as Saturday and Sundays peak periods will restrict through movements on the mainline of I-64 with or without development. Capacity constraints during the above noted time periods on westbound I-64 at the Hampton Roads Bridge Tunnel also meter flows in the area of the Mallory and Woodland interchanges.

HAMPTON ROADS MILITARY AND FEDERAL FACILITIES ALLIANCE
EDUCATE ★ SUSTAIN ★ GROW
WILLIAM D. SESSOMS, JR., MOLLY JOSEPH WARD, CO-CHAIRMEN • E. DANA DICKENS III, TREASURER • DWIGHT L. FARMER, SECRETARY
FRANK ROBERTS, EXECUTIVE DIRECTOR

October 23, 2009

Ms. Robin Mills
Chief, Directorate of Public Works
318 Cornog Lane
Fort Monroe, VA 23651

RE: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR BRAC 2005, DISPOSAL AND REUSE OF FORT MONROE, VIRGINIA

Dear Ms. Mills:

The Hampton Roads Military and Federal Facilities Alliance (HRMFFA) represents the collective interests of the Cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg, and the Counties of Isle of Wight, James City, and York on matters relating to military and federal activities in the Hampton Roads region. We are pleased to submit the following comments regarding the Draft Environmental Impact Statement for the disposal and reuse of Fort Monroe as directed by BRAC 2005.

HRMFFA fully concurs with and supports the Fort Monroe Reuse Plan developed by the Fort Monroe Federal Area Development Authority. HRMFFA commends Mr. Bill Armbruster and the FMFADA team for their tireless work in crafting a reuse plan which provides quality stewardship of the historically significant fort and associated structures; provides opportunity to showcase the fort and explain its history to future generations of Americans; is sensitive to environmental concerns in providing for eco-tourism and environmentally-sensitive development; retains and respects the National Historic Landmark (NHL) status; and provides for economic self-sustainment for maintenance, restoration and operating costs.

The FMFADA plan provides for an orderly return of large portions of the fort to the people of Virginia for their recreational enjoyment while allowing limited future development and reuse of the federally owned property in a responsible manner consistent with the fort's historic charm and with the best interests of the citizens of Virginia at heart.

HRMFFA notes the following concerns related to the future use of Fort Monroe.

- Increased use of the fort by tourists and potential future residents and employees may raise issues with orderly traffic flow to and from the fort, particularly with regard

HRMFFA
REGIONAL ADVOCACY FOR ★FEDERAL INVESTMENT★
430A World Trade Center . Norfolk, Virginia 23510 . (757) 644-6324

to Interstate 64 as well as surface roads within the fort and adjacent portions of the City of Hampton. HRMFFA recommends further study and coordination between FMFADA, the City of Hampton and the Virginia Department of Transportation (VDOT) to ensure the most effective access to and from the fort while minimizing negative impacts on Hampton Roads' already stressed transportation infrastructure.

- Adoption of a mitigation strategy to address potential flood hazards related to sea level rise and hurricane effects. Ensure compliance with flood insurance requirements.

- Ensure adequate infrastructure, particularly water, wastewater treatment, natural gas and electricity, is in place to accommodate any reuse plan. Analysis of infrastructure upgrade or replacement costs should be done to ensure funding is in place or is accurately projected to meet infrastructure needs.

- Conduct comprehensive investigation and analysis of potential presence of hazardous substances and munitions prior to transfer of the property.

HRMFFA considers the Fort Monroe Reuse Plan, and the FMFADA organizational structure that crafted the final document, a model for future disposal and reuse efforts wherever they may be conducted."

Our staff point of contact is Mr. Dan Abrams, HRMFFA Government Affairs Coordinator, 757-644-6324, dabrams@hrmffa.org.

Sincerely,

Will Sessoms

William D. Sessoms, Jr.
Mayor, City of Virginia Beach
Co-Chair
Hampton Roads Military &
Federal Facilities Alliance

Molly Joseph Ward

Molly Joseph Ward
Mayor, City of Hampton
Co-Chair
Hampton Roads Military &
Federal Facilities Alliance

FAR/daa

Copy:
Mr. Bruce Sturk, City of Hampton
Mr. Bill Armbruster, FMFADA

CITIZENS FOR A FORT MONROE NATIONAL PARK, INC.
P.O. Box 97
Fort Monroe, VA 23651

October 29, 2009

Ms. Robin Mills
Director, Directorate of Public Works
318 Cornog Lane
Fort Monroe, VA 23651

Re: Comments on the Draft Environmental Impact Statement for BRAC 2005 Disposal and Reuse of Fort Monroe, VA

Dear Ms. Mills:

Please accept the following as the comments of Citizens for a Fort Monroe National Park, Inc. (CFMNP) on the Draft Environmental Impact Statement for BRAC 2005 Disposal and Reuse of Fort Monroe. CFMNP is a non-profit organization dedicated to achieving the full potential of Fort Monroe as an economically self-sustaining grand public place and innovative national park for the American people.

We want to first express our appreciation to the Army for recognizing that the closure and reuse of Fort Monroe has the potential of causing significant environmental impacts and thus that an Environmental Impact Statement (EIS) was needed. We have reviewed the Draft EIS (DEIS) and recognize a great deal of valuable work has been accomplished and a lot of solid evaluation completed. Our comments following are necessarily focused on areas that we believe need additional attention and reconsideration.

Most fundamentally we believe the DEIS fails to grasp the full environmental value and potential of this national treasure. It recognizes its historic assets to a degree (see pp. ES-2, 4-90-4-94) but in other respects tends to understate Fort Monroe's scenic, visual, and cultural value (e.g., "Fort Monroe has no wild or scenic rivers or magnificent topography", p. 4-13). On the Wherry Quarter the DEIS treats the mostly temporary Army structures there (e.g., the bowling alley, gas station/convenience store, Wherry housing, etc.) as permanent buildings, using them as a baseline against possible erection of permanent buildings to replace them – this of course results in comparing the environmental impact of projected new buildings against the current clutter of temporary buildings, rather than against a largely vacant Wherry Quarter without its thrown-up post World War II, never intended to be permanent buildings. This undervaluing of the current Fort Monroe inevitably leads to understating environmental impacts of the various reuse schemes, particularly when it comes to land use, aesthetic/visual resources, cultural resources and cumulative effects.

Another difficulty in DEIS is attempting to evaluate the rather indefinite and conceptual reuse plan. This is particularly a problem with the highly strategic Wherry Quarter, which bounds on its four sides the immensely important northeast rampart of the moated stone fort, the

wild, seemingly limitless and highly scenic Chesapeake Bay (if you don't think it is wild, view it on a windy winter day), Mill Creek and the 196 acres designated for green space. The Wherry Quarter is designated as "undetermined" in use in the reuse plan, but notwithstanding this the DEIS engages in certain speculations about the range of possible changes here. The Quarter needs the highest level of environmental scrutiny, as apparent plans to develop it threaten to create a character destroying barrier between green areas to north and historic assets to south, thus permanently preventing Fort Monroe from reaching its potential as a unified, seamless environmental and historic jewel for region and nation.

Perhaps struggling with the indefiniteness of the reuse plan, the DEIS suffers from being overly general. For example, in treating the impacts of varying levels of development in the Wherry Quarter on land use, aesthetic/visual resources and cultural resources, the DEIS is remarkably unspecific in describing the likely impacts. On page 4-12, as one illustration, the DEIS determines that the "Upper Bracket" level of development is no more than moderately adverse to Fort Monroe land use principally by a quantitative calculation of open space to be lost overall on the 570 acres. But there is no qualitative identification of the impact of such development (other than the generic classification of impacts as minor, moderate or significant) – where exactly are these additional buildings going to be placed, what will they do to green space (or green space after temporary Wherry Quarter buildings removed) between northeast rampart of stone fort, Chesapeake Bay, Mill Creek and the 196 acres of designated green space, to the viewsheds to and from the northeast rampart of the stone fort (and to and from the Bay, the 196 acres of open space and the Wherry Quarter land) or to the overall linkages between the historic areas and green space and Chesapeake bayfront? A similar general analysis is employed in considering aesthetics/visual resources (pp.4-22-4-23) and cultural resources (pp. 4-102).

The three reuse options do not address a national park unit at Fort Monroe. That the possible national park unit under consideration is undefined should be no more a reason not to consider it as an alternative than that the reuse plan is largely unspecific.

In evaluating land use, we did not locate any consideration of the larger needs of region for public open space, especially along the water. The recent Trust for Public Land Study (http://www.tpl.org/tier3_cd.cfm?content_item_id=22680&folder_id=3208) is not even mentioned, despite fact it was presented to FMFADA earlier this year, and the report and its author, Peter Harnik, are not listed in references (DEIS, Part 7). Indeed core Hampton Roads is markedly deficit in public open space along the water and thus maximizing Fort Monroe acreage in open space, and attaining seamless linkages of open space to historic properties, are critical from an environmental standpoint.

And the Chesapeake Bay, the greatest estuary in the world and on which Fort Monroe proudly lies, continues to get short shrift as a consideration in what occurs at Fort Monroe. The Bay has recently been highlighted as a national priority of the first rank, by President Obama's Executive Order 13508, signed on May 12, 2009. The positive environmental benefits of a public environmental and historic jewel at Fort Monroe for the Bay, which is largely devoid of any significant public parcels that are both easily accessible and offer multi-faceted interest to visitors, are not easily overstated. But for Fort Monroe to be an environmental jewel the areas north and east of stone fort, most especially, must be managed and developed (if at all), in a

limited fashion and with the greatest care. Further, the low lying nature of all the property at Fort Monroe suggests the addition of any significant number of new buildings in Wherry Quarter or elsewhere should be undertaken only after full evaluation of the impact (including economic impacts) of storms on this property.

With that background, we make following specific recommendations:

1. Restate baseline conditions, with recognition of this 570 acre semi-island's peerless situation as not only a historical treasure but an environmental gem of the first order for the region and the nation. Include:

- recognition of its value as highly accessible public grandstand, environmental demonstration project and educational base for public appreciation for the Chesapeake Bay and its restoration, which potential can only be reached through the highest level of environmental protection, particularly on the acreage northeast of the moated stone fort.
- recognition of the core Hampton Roads region's relatively impoverished situation compared to many other major waterfront metropolitan areas (e.g. San Francisco, Washington, Boston, New York) in terms of public waterfront land.
- recognition of Wherry Quarter's current situation, with a clutter of undistinguished cheaply constructed buildings, as "temporary" in nature, and thus evaluate environmental impact of any new development here in comparison to a largely unoccupied terrain on the northeast rampart of the stone fort.
- overall recognition that the compact 570 acres of Fort Monroe, with its absolutely unique combination of significant history over the entire span of the American experience, a concentration of intact magnificent architecture including the largest moated fort ever built in North America, a landscape of incredible beauty and interest, and varied and valuable natural resources all within walking distance of each other, is one of the most precious sites in Eastern North America to the human experience.

2. Rework projected environmental impacts in light of this adjusted recognition of the environmental value of the property, particularly in terms of land use, aesthetic/visual resources, cultural resources and cumulative effects, including by engaging in far more detailed evaluation of impacts of possible development in area northeast of moated stone fort. The cumulative impacts upon surrounding communities, i.e., Buckroe and Phoebus, from the alternative schemes for Fort Monroe should be more closely evaluated as well. It is also important to consider the Army's viewshed and cultural landscape studies, now in progress.

3. Add evaluation of a fourth reuse alternative, a national park unit in partnership with the Commonwealth at Fort Monroe. The existence of such a unit would provide financial and other resources to the property that would potentially allow a higher level of environmental stewardship and lower dependence upon revenue-producing new development, and thus more beneficial environmental effects than any of three brackets currently evaluated. A national park unit on the Chesapeake Bay, directly connected to other sites by Captain John Smith Chesapeake National Historic Trail, would likely have a significant positive benefit over time for public appreciation, awareness and enjoyment of the Bay, and therefore for its health and economic utility.

4. Develop additional mitigating measures to protect landscapes and green linkages between historic area and 196 acres designated as open space (especially in Wherry Quarter), to protect lands fronting upon and viewsheds to and from Chesapeake Bay and to and from northeast rampart of stone fort, and to protect lands fronting upon and viewsheds to and from Mill Creek.

5. Require Army to obtain commitment from Commonwealth and FMFADA that Supplemental EIS will be performed when and if (i) any development plan (other than current interim use plan) is formulated for Wherry Quarter; (ii) when the current reuse plan is significantly altered in any manner that could cause significant environmental impacts; or (iii) the programmatic agreement is terminated (or significantly amended in any manner that could cause significant environmental impacts).

Sincerely,

Mark Perreault

Mark Perreault

cc: Mr. Steve Owens, Commonwealth of Virginia, Office of the Attorney General
Mr. Rick Weeks, Commonwealth of Virginia, Department of Environmental Quality
Ms. Kathleen Kilpatrick, Virginia Department of Historic Resources
Mr. Bill Armbruster, Executive Director, FMFADA
Mr. Jim Campi, Civil War Preservation Trust
Mr. Robert Nieweg, National Trust for Historic Preservation
Ms. Catharine Gilliam, National Parks Conservation Association
Ms. Elizabeth Kostelny, Preservation Virginia
Ms. Christy Everett, Chesapeake Bay Foundation
Mr. Peter Harnik, Trust for Public Land
Mr. Jeter Watson, Environmental Law Group, PLLC

att: Kabin Mills -

Sorry - my computer is down today. I hope you can read the script

Thanks -

Joanne Berkley
757-423-6033

Chesapeake Bay Foundation
BayCare Chapter
1419 Buckingham Ave.
Norfolk, Va. 23508

Ms. Robin Mills
Chief directorate of Public Works
318 Cornog Lane
Fort Monroe, Va 23651

Re: DEIS for the BRACOS action at Fort Monroe, Va

Dear Ms Mills.

The BayCare Chapter of C.B.F. represents our members in Norfolk, Virginia Beach, Chesapeake, Suffolk, Hampton, Newport News and surrounding areas in South Hampton Roads.

Bay Care fully supports the comments of the Chesapeake Bay Foundation re - the DEIS for Ft. Monroe. In particular we also point out the lack of DEIS emphasis for a <u>self sustaining</u> national park unit at Fort Monroe. This is disappointing considering the large number of comments that were concerned with the establishment of a national park unit.

We also note -

The DEIS does not emphasize the value of the open space in the Whorrey Recreation and does not include the results of the View shed analysis.

A more in depth look at the cumulative impacts of development at Ft. Monroe should have been included

Although it is recent the Federal Executive Order of May 12, 2009 concerning the Chesapeake Bay, should have been included and commented on in depth as it applies to federal lands that could impact the Bay. This omission should be corrected.

I am including a copy of the State of the Region/ Hampton Roads 2009 Report's section on the economic and physical impact of sea level rise in Hampton Roads in the coming century which will definitely affect Fort Monroe. Thank you for the opportunity to comment.

Joanne Berkley
Chairman - Bayland Chapter
Chesapeake Bay Foundation

CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

OFFICERS
D. KEITH CAMPBELL
CHAIRMAN
JAMES E. ROGERS
VICE CHAIRMAN
SUSAN S. PHILLIPS
SECRETARY
ALAN L. WURTZEL
TREASURER
WILLIAM C. BAKER
PRESIDENT

EX OFFICIO TRUSTEES
GOVERNOR MARTIN O'MALLEY
GOVERNOR TIMOTHY M. KAINE
GOVERNOR EDWARD G. RENDELL
MAYOR ADRIAN M. FENTY
JOANNE S. BERKLEY
BAY CARE CHAPTER
HAL C. B. CLAGETT
CLAGETT TRUSTEE

TRUSTEES
DONALD F. BOESCH, PH.D.
JOHN T. CASTEEN, III
RICHARD L. FRANYO
G. WADDY GARRETT
ALAN R. GRIFFITH
CAROLYN GROOBEY
MICHAEL J. HANLEY
VIRGINIA R. HOLTON
ROBERT A. KINSLEY
MATTHEW J. KLEIN
BYRON F. MARCHANT
WAYNE A. MILLS
CHARLES W. MOORMAN, IV
W. TAYLOE MURPHY, JR.
MARIE W. RIDDER
ALEXIS G. SANT
TRUMAN T. SEMANS
SIMON SIDAMON-ERISTOFF
JENNIFER STANLEY
THOMAS H. STONER
RT. REV. EUGENE TAYLOR SUTTON
MICHAEL WATSON
ANTHONY A. WILLIAMS

HONORARY TRUSTEES
LOUISA C. DUEMLING
C. A. PORTER HOPKINS
BURKS B. LAPHAM
T. GAYLON LAYFIELD, III
H.F. LENFEST
M. LEE MARSTON
CHARLES McC. MATHIAS
H. TURNEY MCKNIGHT
GODFREY A. ROCKEFELLER
RUSSELL C. SCOTT
EDMUND A. STANLEY, JR.
AILEEN BOWDOIN TRAIN

October 29, 2009

VIA ELECTRONIC COMMUNCIATION: monr.post.nepapublic@us.army.mil

Ms. Robin Mills
Chief Directorate of Public Works
318 Cornog Lane
Fort Monroe, VA 23651

Re: Draft Environmental Impact Statement (DEIS) for the Base Realignment and Closure (BRAC) 05 Actions at Fort Monroe, Virginia

Dear Ms. Mills:

On behalf of the Chesapeake Bay Foundation (CBF), I wish to provide the following comments on the Draft Environmental Impact Statement (DEIS) for the Base Realignment and Closure (BRAC) 05 Actions at Fort Monroe, Virginia that was listed in the Federal Register dated September 14, 2009 as a Notice of Availability.

Consideration of a National Park

CBF believes the DEIS underestimates the potential of a significant national park unit operating in partnership with the Commonwealth at Fort Monroe. This is a realistic alternative and is very likely to have favorable environmental consequences for any areas that would be included within the borders of any National Park on the property.

Water Quality

The DEIS states that surface water quality around Fort Monroe is listed as impaired and does not meet water quality standards (DEIS, 4-59). Therefore, CBF believes that proposed development efforts on Fort Monroe should consider impacts on the water quality in waterways surrounding the site.

CBF suggests that the DEIS should address building from the "Clean Marina" status already approved for the Old Point Comfort Marina and recommends establishment of a "no discharge zone" for Mill Creek and the portion of the Chesapeake Bay located between the marina and the Hampton Roads Bridge Tunnel. "No discharge zones" offer an important educational tool and help to directly address the Bay's most significant pollution problem – excess nutrients – by requiring boaters to dispose of their waste through pump-out facilities. CBF believes this action would offset many of the issues associated with the proposed

HAMPTON ROADS | 142 WEST YORK STREET, SUITE 618 | NORFOLK, VA 23510
757/622-1964 | FAX: 757/622-7861 | CBF.ORG/HAMPTONROADS

increase in size of the marina by as much as 30 percent (DEIS, 4-62).

The DEIS notes the passage of the Chesapeake Bay Preservation Act. A signature requirement of the Act is a buffer to protect water quality from contaminants that become entrained in stormwater as it flows off the land. Although much of this buffer has been fragmented by past activities, we suggest developing a wide riparian buffer, planted with native vegetation, along the shoreline of Mill Creek. Riparian buffers provide valuable wildlife habitat and filter runoff, reducing the flow of excess nutrients to the surrounding waterways.

Natural shoreline restoration and riparian buffers can also help to protect property and infrastructure from damage during major storm surges. As the DEIS notes, this protection will be increasingly important as the entire property lies within the 100-year floodplain. In addition to protecting the shoreline from flood events, the DEIS notes that completion of a study by the United States Army Corps of Engineers recommended installation of backflow control devices on stormwater outfalls as a means of controlling flooding within the property. To date it appears the devices have only been installed on 14 of the 45 storm sewers that discharge into surface waters and the moat. Knowing this, we advise that restoration of these outfalls be part of any infrastructure restoration program on the property in order to reduce pollutants that are carried by floodwaters.

The DEIS mentions that impervious cover will increase from 24 percent to 28 percent under the proposed development scenarios (4-56). CBF recommends that the DEIS address the use of innovative stormwater control techniques that will allow the amount of impervious cover proposed to be reduced. Infiltration should be maximized to capture any pollutants using control measures, often referred to as "environmental site design" or "low impact development." These practices promote the slowing down, spreading out, and infiltration of stormwater instead of having it quickly conveyed to collection systems that deposit the water untreated in the nearest surface water body. A few practices to consider in the DEIS include: 1) using permeable pavement and pavers; 2) utilizing green roofs; 3) preserving vegetation, buffers, and open space; 4) maintaining grass channels and swales; 5) constructing rain gardens; 6) creating bioretention areas; and 7) disconnecting or redirecting downspouts that empty over pavement and directing the runoff to vegetative areas.

Habitat Considerations

The DEIS states that, "up to 100 acres may ultimately be disturbed from redevelopment, spread over the course of 20 years. Of this acreage, only a quarter is open green space which would be lost to development." Although this impact appears minimal, CBF feels that redevelopment should focus on the restoration of green and open space on the property.

Negative effects of proposed northern connector road

To ensure the protection of Fort Monroe's natural setting, CBF recommends against the construction of a new roadway connecting the north end of the property with the Buckroe Beach area (DEIS, 4-40 which refers to Fort Monroe Reuse Plan, page 7.4). The proposed use of the north end of the property as a natural area and a site for marsh and other restoration

activities would be incompatible with the presence of a through road, and the location of the proposed road would greatly impact important onsite wetland habitat resources. There will be adverse environmental impacts, especially to the marsh and dunes, from the construction and presence of the northern connector road. The north end of the property will be, de facto and by design, the most attractive area to wildlife on the property. Of particular concern is the impact of traffic on nesting birds and turtles, and migrant birds and Monarch butterflies.

Native/non-native vegetation
The DEIS indicates that native habitats on Fort Monroe included maritime forests with an abundance of other salt tolerant herbaceous and woody plants. The DEIS further states that much of this original habitat has been disturbed by various activities on the property. This has resulted in the introduction of 22 invasive or undesirable species cataloged on the property (DEIS, 4-68). An aggressive invasive species, *Phragmites australis* is located along the northern shoreline of the fringe marsh. Control of this problematic invasive will allow beneficial native marsh vegetation such as *Spartina alterniflora* and *Juncus roemerianus* to thrive, providing improved wildlife habitat.

Much of the upland riparian buffer area is significantly impacted with invasive species as well. Shrubby growth of Amur Honeysuckle, *Lonicera maackii*, dominates much of the upland buffer along the creek. The DEIS should call for the development of a comprehensive plan to remove non-native vegetation and restore native habitats as part of the overall reuse plan for Fort Monroe. An example of this plan could include the removal of non-native honeysuckle vegetation and replacement with native plants appropriate to the habitat. Native plants such as American Beach Plum have already been established in the dune area and similar efforts should be expanded. Additionally, native beach grass restoration on the bayside of Fort Monroe could also help to reduce further dune erosion.

Current landscaping guidelines at Fort Monroe specify the use of native vegetation. This practice benefits a number of species and greatly enhances populations of native pollinators, like honey bees and butterflies. The continued use of native vegetation should be specified in future landscaping standards for Fort Monroe. Gardens that illustrate good conservation landscaping practices can be established at the visitor center(s), as well as the grounds of other existing buildings throughout Fort Monroe. New gardens can be planned as habitat demonstration areas that illustrate how native plants can be used in more traditional landscape settings.

As described in DEIS, 4.8.1.1, historical habitats on the property consisted as a mixture of maritime forests, woody, and herbaceous vegetation. Open areas maintained by regular mowing exist in the Park & Recreation (PR) area of Fort Monroe. Many native plant species have been observed in the mowed areas, but the heavy mowing severely inhibits their growth. While much of this space is necessary to support recreation activities, simply not mowing designated areas would allow native plants to quickly restore themselves to their natural range in many areas of the Fort. The resulting warm season grass/wildflower meadows would be aesthetically pleasing and support pollinators such as butterflies and grassland species such as bluebirds and tree swallows. This habitat can be further enhanced through the placement of bird and bat

nesting boxes. Areas that will remain in turf management could also benefit from the creation of hedgerows consisting of native shrubs such as Eastern red cedar and myrtle. These would provide windbreaks and shelter for wildlife as well as important fall and winter food sources.

Habitat resources and opportunities for restoration of the northern section
CBF recognizes that Fort Monroe, with a variety of habitat types, offers excellent opportunities for wildlife-based recreation and conservation and appreciates the numerous references to factors that might create disturbances to wildlife throughout the DEIS.

Mill Creek and its associated wetlands and mudflats represent a significant habitat feature. The creek acts as habitat and a nursery for a number of fish and invertebrate species – these in turn support birds such as osprey, heron, and egrets. A fringe marsh exists along much of the shoreline (especially along the northern end) and a number of marshy islands provide breeding habitat for birds such as clapper rail. Mill Creek is relatively shallow with extensive exposed mudflats at low tide. This provides excellent foraging habitat for a variety of marsh and shorebirds.

Bird watching is a popular activity and the varied habitats (marsh, beach, lagoon, Live Oak stands, grassy areas, and brushy areas) at Fort Monroe suggest that it will be an excellent and popular bird watching site. The Delmarva Peninsula is one of the most significant migratory flyways on the Atlantic coast. Large numbers of neo-tropical migrant and raptors are funneled along this peninsula every autumn, eventually crossing over the Chesapeake Bay at the Southern Tip. At less than 20 miles from the southern tip of the Delmarva Peninsula, Fort Monroe is a potentially important landfall for these migrating birds. The protected waters and marshes of Mill Creek are attractive to a variety of winter waterfowl.

In shoreline areas along the creek, the buffers are composed of shrubby early successional habitat with some larger trees. While relatively small, these areas provide potential breeding habitat for early successional species such as eastern towhee and brown thrasher. These areas also provide stopover and foraging areas for migratory songbirds. The largest of these buffer areas may represent the early stages of a Coastal Maritime Forest ecosystem, an increasingly threatened habitat type.

The beaches at the northern end of Fort Monroe are marked by a fairly well-developed set of dunes. The waters offshore of the beaches are utilized as foraging areas by a variety of seabirds including brown pelicans, terns, gulls, and black skimmers. The beaches themselves provide foraging habitat for shorebirds while the dunes offer habitat for songbirds and butterflies.

The foredunes are generally well-vegetated with native beach grasses, providing good stabilization. The dune crowns and back dune area are characterized by a variety of herbaceous plants, vines shrubs, and stunted trees. In places the back dunes are dominated by invasive vegetation such as turf grass and fennel *Foeniculum vulgare*.

The open space in the central and southern parts of the PR area is mostly open field maintained by regular mowing. A significant resource in these areas is the Loblolly Pine and, especially,

Live Oak groves in and around the camping areas, picnic areas, and former officers' club. They provide welcome shade to visitors and are important foraging habitat for a variety of birds. The central and southern PR areas also host the Endicott batteries, which are locally overgrown with brushy successional vegetation. This provides shelter and food for a variety of wildlife.

From the Wherry District south, little in the way of natural environments remain. However, there are several important resources in this highly impacted area. First, the ancient Live Oak groves inside the Fort proper are a natural resource nearly unique to the region. In addition, many of the trees within the Fort and Historic Village, although planted, are nevertheless native species. All of these trees, but especially the Live Oaks, will be a magnet for migratory birds, not to mention an integral part of the local viewscape.

Fort Monroe is, from an environmental perspective, a heavily impacted site. Given this, it is important that the surviving environmental resources be carefully managed and protected.

The DEIS should have clearly acknowledged that first and foremost among environmental priorities is the preservation and restoration of the northern portion and its adjacent marshes as a natural area. This area contains much of the marsh, all of the dunes, and the only surviving fragment of maritime forest on the property. It is the only large tract on the property that remains in anything approaching a natural state. Preservation of this area must preclude any new construction aside from carefully planned trails (possibly including a small marsh viewing platform) and any work necessary for restoration and/or preservation of key environmental features. This work may include, for example, removal of a recently installed series of streetlights.

The DEIS should have recognized that another environmental priority is the protection of marshes in other parts of Mill Creek. Any educational or recreational resources that use the marshes must, first and foremost, not harm the marshes. There are relatively few mature trees on the property and these should be protected during construction and renovation of buildings. Live Oaks represent a species of special interest to the Fort and should be considered untouchable during any renovation or new construction.

Furthermore, the DEIS should have explored constructing a living shorelines project along Mill Creek in the area located near the north end of the property. Living shorelines not only protect the marsh shoreline from erosion, but also provide a wealth of wildlife habitat. As part of a living shoreline, we also suggest building an intertidal, sanctuary oyster reef just off shore in Mill Creek. An oyster reef project at this site could be highly visible to visitors from the nearby bird observation platform and a welcome opportunity for environmental education.

Also along the shoreline of Mill Creek is a great deal of shoreline hardening, or concrete "caps" and various piles of concrete debris. In many places, this concrete capped shoreline is showing signs of wear, undercutting, and erosion, which will eventually lead to its failure. We suggest that the concrete portions be removed and a natural or living shoreline be restored along this stretch. A living shoreline offers a more sustainable approach to preventing erosion, and this

stretch in particular may be ideally suited for a low-marsh-toe sill with a living shoreline constructed landward.

Federal Executive Order

As you are well aware, on May 12, 2009, President Barack Obama signed an Executive Order (EO) that calls on the federal government to lead the effort to control pollution that flows to the Chesapeake Bay and protect wildlife habitats in the region. As you will note in these opening sentences of the EO, this applies to those federal landholders that can and should direct sustainability practices on the lands that potentially have an impact on the Bay, which applies directly to Fort Monroe given its geography and its close proximity to the Bay:

> *By the authority vested in me by the Constitution and the laws of the United States of America and in furtherance of the purposes of the Clean Water Act of 1972, as amended (33 U.S.C. 1251 et seq.), and other laws, and to protect and restore the health, heritage, natural resources, and social and economic value of the Nation's largest estuarine ecosystem and the natural sustainability of its watershed, it is hereby ordered as follows: The Federal Government has nationally significant assets in the Chesapeake Bay and its watershed in the form of public lands, facilities, military installations, parks, forests, wildlife refuges, monuments, and museums.*
>
> *Restoration of the health of the Chesapeake Bay will require a renewed commitment to controlling pollution from all sources as well as protecting and restoring habitat and living resources, conserving lands, and improving management of natural resources, all of which contribute to improved water quality and ecosystem health. The Federal Government should lead this effort.*

Regarding Part Five of the EO, "Reduce Water Pollution from Federal Lands and Facilities," note the directive to protect management responsibilities of sound land management to areas such as Fort Monroe:

> *Agencies with land, facilities, or installation management responsibilities affecting ten or more acres within the watershed of the Chesapeake Bay shall, as expeditiously as practicable and to the extent permitted by law, implement land management practices to protect the Chesapeake Bay and its tributary waters consistent with the report required by section 202 of this order and as described in guidance published by the EPA under section 502.*

Note in Part Seven of the EO, "Expand Public Access to the Chesapeake Bay and Conserve Landscapes and Ecosystems," there is particular interest in existing sites on agency lands and facilities where public access to the Chesapeake Bay or its tributary waters is offered, could be expanded, or where new opportunities could be provided – which are all applicable to and deserve special attention at Fort Monroe, and are referred to numerous times within the Fort Monroe Reuse Plan that is included in the DEIS. Also applicable to Fort Monroe, in that same section, there is interest in landscapes and ecosystems in the Chesapeake Bay watershed that merit recognition for their historical, cultural, ecological, or scientific values and call for

options for conserving these landscapes and ecosystems. Finally, note another section of Part Seven, in which the EO calls for areas to be given special consideration if they overlap with the Captain John Smith Chesapeake National Historic Trail, in which Fort Monroe could be well aligned.

President Obama's May 2009 EO draws timely and pertinent correlations with Fort Monroe, and calls for a high standard to be demonstrated by the Federal Government in the optimal protection and utilization for sites such as Fort Monroe given their ability to affect the restoration efforts of the Chesapeake Bay.

If you have any questions, please contact me at 757/622-1964 or at ceverett@cbf.org. Thank you in advance for your consideration of these comments.

Sincerely,

Christina M. Everett
Hampton Roads Director

cc: Ann Jennings, Virginia Executive Director, CBF

Source
DEIS: Draft Environmental Impact Statement for BRAC 2005 Disposal and Reuse of Fort Monroe, Virginia. U.S. Army Corps of Engineers: Mobile District. August 2009

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Custom House, Room 244
200 Chestnut Street
Philadelphia, Pennsylvania 19106-2904

IN REPLY REFER TO:

October 20, 2009

9043.1
ER 09/996

Ms. Robin Mills
Chief, Directorate of Public Works
318 Cornog Lane
Fort Monroe, Virginia 23651

Dear Ms. Mills:

This letter is in response to the Notice of Availability of the Draft Environmental Impact Statement (DEIS) for the Base Realignment and Closure (BRAC) 05 Actions at Fort Monroe, Virginia. The Department of Interior (Department) offers the following comments on the DEIS and proposed project for your consideration.

GENERAL COMMENTS

The Department believes that the closure of Fort Monroe under BRAC has the potential for adverse effects on the Fort Monroe National Historic Landmark (NHL) Historic District. The DEIS only applies to the land that does not revert to the Commonwealth. Figure 2.2-1 on page 2-6 shows the reversionary and non-reversionary land. The bulk of the contributing resources to the NHL Historic District will revert to the Commonwealth and will be managed by the Fort Monroe Federal Area Development Authority (FADA). The remainder of the Fort will be disposed of through BRAC disposal techniques. These areas are Management Zone 3, North Gate, and the western edge of Management Zone 4, Historic Village. Transfer of fee-simple interest in property with Historic Buildings and Structures or with Archeological Sites will include appropriate covenants that will provide adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance. It would be desirable for the non-reversionary land to also be transferred to the Fort Monroe FADA, so that the entire NHL Historic District would be under single ownership and management.

The Programmatic Agreement was developed for the Army to meet their responsibilities under Section 106 of the National Historic Preservation Act. It provides adequate legal mechanisms to protect the integrity of the NHL Historic District. It requires:

(1) the Army to do additional studies of the cultural landscape and viewsheds at the Fort, and to update the National Historic Landmark documentation;

(2) the Fort Monroe FADA to prepare Design Standards to guide historic preservation and new development at the Fort;

(3) the Commonwealth of Virginia to create the position of Fort Monroe Historic Preservation Officer to carry out a review process using the Design Standards that will ensure that adverse effects are eliminated, minimized, or mitigated, as required by Section 106.

SPECIFIC COMMENTS

The Early Transfer Option outlined in the DEIS is undesirable because all environmental remediation should be completed before land and buildings are transferred to new owners.

Construction of a road at the north end of the peninsula to connect to the Buckroe Beach neighborhood of Hampton, Virginia, is undesirable as it would be inconsistent with the proposed use of the north end of the property as a natural area and a site for marsh and other restoration.

Table 4.9-2, Invited Signatories and Concurring Parties for the Programmatic Agreement (PA), incorrectly shows the National Park Service (NPS) as a concurring party. The National Park service (NPS) is an invited signatory and NPS Northeast Regional Director Dennis R. Reidenbach signed the PA on March 16, 2009. Your point of contact in the NPS for further coordination concerning this matter is Lloyd Chapman, telephone 215-597-2334.

We appreciate the opportunity to provide these comments.

Sincerely,

Michael T. Chezik
Regional Environmental Officer

L. Chapman, NPS, Philadelphia, PA
T. Dean, FWS, Gloucester, VA

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
TDD (804) 698-4021
www.deq.virginia.gov

L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

November 6, 2009

Ms. Robin Mills, Chief
Directorate of Public Works
318 Cornog Lane
Fort Monroe, Virginia 23651

RE: Draft Environmental Impact Statement and Federal Consistency Determination for the BRAC 2005 Disposal and Reuse of Fort Monroe, City of Hampton, Virginia (DEQ 09-187F).

Dear Ms. Mills:

The Commonwealth of Virginia has completed its review of the August 2009 Draft Environmental Impact Statement (DEIS) (received September 10, 2009) and October 2009 Federal Consistency Determination (FCD) (received October 2, 2009) for the BRAC 2005 Disposal and Reuse of Fort Monroe, located in the City of Hampton, Virginia. The Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of federal environmental documents and responding to appropriate federal officials on behalf of the Commonwealth. DEQ is also responsible for coordinating Virginia's review of FCDs submitted pursuant to the Coastal Zone Management Act (CZMA) and providing the state's response. The following agencies, locality and planning district commission participated in the review of the EA and FCD for this proposal:

Department of Environmental Quality
Department of Conservation and Recreation
Department of Game and Inland Fisheries
Virginia Marine Resources Commission
Department of Agriculture and Consumer Services
Department of Health
Department of Mines, Minerals and Energy
Department of Historic Resources
Department of Transportation
City of Hampton
Hampton Roads Planning District Commission

The Department of Forestry and Virginia Institute of Marine Science were also invited to comment on the proposal.

PROJECT DESCRIPTION

The Department of the Army at Fort Monroe, in conformance with the provisions of the Defense Base Closure and Realignment Act of 1990 (Base Closure Act), Public Law 101-510 as amended and the recommendation of the 2005 Base Closure and Realignment (BRAC) Commission, intends to close Fort Monroe. The BRAC Commission's recommendation became binding on November 9, 2005, therefore making surplus to the Army the non-reverting property at Fort Monroe. Under the Base Closure Act, all Army missions at Fort Monroe must cease or be relocated and the Army's excess real property interests at Fort Monroe will be disposed of and transferred to new owners according to all applicable laws, regulations, and national policy. Closure is required by no later than September 15, 2011.

The Army has submitted a Draft Environmental Impact Statement (DEIS) that evaluates the environmental and socioeconomic impacts of closing the installation and disposing of the 570-acre federal fee-owned property and considers reasonable reuse alternatives. The DEIS also considers the cumulative impacts of potential reuses of approximately 290 acres of the property that will revert to the Commonwealth of Virginia according to deed provisions established when the Army was granted ownership of the property.

Disposal Alternatives for Non-reverting Property

For non-reverting property, the Army has identified two disposal alternatives (early transfer and traditional), a caretaker status alternative, and a no action alternative.

- **Early transfer alternative**-the Army would utilize various property transfer and disposal methods that allow for reuse before environmental remedial action has been completed.
- **Traditional disposal alternative**-the Army would transfer or dispose of property once environmental remediation is completed for individual parcels of the installation.
- **Caretaker status alternative**-would arise in the event the Army is unable to dispose of any or all portions of the non-reverting property within the period of initial maintenance.
- **No action alternative**-the Army would continue operations at Fort Monroe at levels similar to those occurring prior to the 2005 BRAC Commission's recommendation for closure.

Reuse Alternatives

Three reuse scenarios, based on a range of redevelopment intensities, encompass the Fort Monroe Federal Area Development Authority (FMFADA) Reuse Plan and are evaluated as secondary actions. The DEIS addresses reuse of all property on Fort Monroe, including property that will revert to the Commonwealth of Virginia as part of the plan for reuse. Three separate levels of intensity for the reuse of Fort Monroe are analyzed, including a Lower Bracket, Middle Bracket, and Upper Bracket.

- **Middle Bracket**-considered to be commensurate with long-term build-out of the FMFADA Reuse Plan.
- **Lower Bracket**- commensurate with a recreational tourism destination (e.g., beaches, open space, military museums, historic structures, accommodations, and amenities), with reduced employment and limited changes to existing structures as compared to current conditions.
- **Upper Bracket**-similar to the FMFADA Reuse Plan, but with higher residential and commercial development than what is assumed for the Middle Bracket scenario.

CONCLUSION

Based on the information provided in the DEIS and comments from reviewers, the Commonwealth of Virginia has no objection to the proposal as presented, provided the Army complies with all applicable laws and regulations.

Water quality and wetland impacts will require authorization by DEQ under the Virginia Water Protection Permit Program. Erosion and sediment control, stormwater management and impacts to Chesapeake Bay Preservation Areas will require review by the Department of Conservation and Recreation or the City of Hampton depending upon whether land-disturbing activities are a result of federal, state or private development. Impacts to state subaqueous lands fall under the authority of the Virginia Marine Resources Commission. Disposal and reuse activities should be coordinated with the U.S. Fish and Wildlife Service, National Marine Fisheries Service and the Virginia Department of Game and Inland Fisheries to ensure the protection of federally- and state-listed marine mammals, sea turtles and avian species. Activities must be conducted in accordance with the Programmatic Agreement for the treatment of historic resources between the Army, Virginia Department of Historic Resources, Advisory Council on Historic Preservation, Fort Monroe Federal Area Development Authority, the Commonwealth and the National Park Service.

Provided activities are performed in accordance with the recommendations which follow, this project is unlikely to have significant effects on ambient air quality, water quality, important farmland, wetlands, wildlife, historic resources or forest resources. It

will not affect species of plants, animals, or insects listed by state agencies as rare, threatened, or endangered.

ENVIRONMENTAL IMPACTS AND MITIGATION

1. Water Quality & Wetlands. According to the DEIS (page ES-7), there would be a range of minor adverse effects and minor beneficial effects to water resources including surface water quality under the disposal and reuse alternatives. Also, there would be a range of moderate adverse effects and minor beneficial effects to biological resources, including wetlands, associated with the disposal and reuse alternatives.

1(a) Agency Jurisdiction. The State Water Control Board (SWCB) promulgates Virginia's water regulations, covering a variety of permits to include Virginia Pollutant Discharge Elimination System (VPDES) Permit, Virginia Pollution Abatement Permit, Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection Permit (VWPP). The VWPP is a state permit which governs wetlands, surface water, and surface water withdrawals/impoundments. It also serves as § 401 certification of the federal *Clean Water Act* § 404 permits for dredge and fill activities in waters of the U.S. The VWPP Program is under the Office of Wetlands and Water Protection/Compliance, within the DEQ Division of Water Quality Programs. In addition to central office staff that review and issue VWP permits for transportation and water withdrawal projects, the seven DEQ regional offices perform permit application reviews and issue permits for the covered activities.

1(b) Agency Comments. The DEQ Office of Wetlands and Water Protection (OWWP) responded directly (October 26, 2009 letter, attached) to the Army's request for comments on the DEIS. Comments from DEQ-OWWP are summarized and included in the following discussion.

Virginia Water Protection Permit

DEQ's Tidewater Regional Office (TRO) notes that the DEIS clearly identifies the presence of surface water and wetland resources on Fort Monroe which may be affected as a result of redevelopment or reuse of this facility in the future. While the document (page 4-85) addresses compliance with Section 404 of the Clean Water Act via consultation with the U.S. Army Corps of Engineers (Corps), it makes no reference to compliance with state surface water and wetland requirements under the VWPP that are independent of Section 404 and may be more encompassing both spatially and with respect to regulated activities (i.e. isolated wetlands, excavation, etc.).

Comprehensive Environmental Response, Compensation and Liability Act

According to DEQ-OWWP, the areas of the project that fall under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) do not require a VWPP.

Resource Conservation and Recovery Act

According toe DEQ-OWWP, the areas of the project under the authority of the Resource Conservation and Recovery Act (RCRA) may require a VWPP for potential impacts to surface waters, including wetlands.

1(c) Recommendations. DEQ-TRO recommends that the FEIS should clarify that DEQ will be included in any coordination and subsequent permitting determinations regarding impacts to surface waters, including wetlands as defined in state law.

DEQ-OWWP recommends that the Army coordinate with the Department of Game and Inland Fisheries as well as the Department of Conservation and Recreation and/or the U.S. Fish and Wildlife Service regarding presence of endangered or threatened species and/or habitat, prior to seeking a permit from the DEQ, since state and federal threatened and endangered species have been identified in the proximity of the project.

In general, DEQ recommends that stream and wetland impacts be avoided to the maximum extent practicable. To minimize unavoidable impacts to wetlands and waterways, DEQ recommends the following practices:

- Use directional drilling from upland locations for stream crossings, to the extent practicable. If directional drilling is not feasible, stockpile the material excavated from the trench for replacement.
- Consider using a work bridge rather than a causeway to reduce temporary impacts.
- Operate machinery and construction vehicles outside of stream-beds and wetlands; use synthetic mats when in-stream work is unavoidable;
- Construct the trench for the utility line in a manner that does not drain the wetlands (for example, backfilling with extensive gravel layers thereby creating a French drain effect).
- Preserve the top 12 inches of trench material removed from wetlands for use as wetland seed and root-stock in the excavated area.
- Erosion and sedimentation controls should be designed in accordance with the most current edition of the Virginia Erosion and Sediment Control Handbook. These controls should be in place prior to clearing and grading, and maintained in good working order to minimize impacts to state waters. The controls should remain in place until the area is stabilized.

- Monitor construction activities to ensure that erosion and stormwater management practices are adequately preventing sediment and pollutant migration into surface waters, including wetlands.
- Place heavy equipment, located in temporarily impacted wetland areas, on mats, geotextile fabric, or use other suitable measures to minimize soil disturbance, to the maximum extent practicable.
- Restore all temporarily disturbed wetland areas to pre-construction conditions and plant or seed with appropriate wetlands vegetation in accordance with the cover type (emergent, scrub-shrub, or forested). The applicant should take all appropriate measures to promote re-vegetation of these areas. Stabilization and restoration efforts should occur immediately after the temporary disturbance of each wetland area instead of waiting until the entire project has been completed.
- Any temporary impact should be restored to their original contours and revegetated with the same or similar species.
- Place all materials which are temporarily stockpiled in wetlands, designated for use for the immediate stabilization of wetlands, on mats, geotextile fabric in order to prevent entry in State waters. These materials should be managed in a manner that prevents leachates from entering state waters and must be entirely removed within thirty days following completion of that construction activity. The disturbed areas should be returned to their original contours, stabilized within thirty days following removal of the stockpile, and restored to the original vegetated state.
- All non-impacted surface waters within the project or right-of-way limits that are within 50 feet of any clearing, grading, or filling activities should be clearly flagged or marked for the life of the construction activity within that area. The project proponent should notify all contractors that these marked areas are surface waters where no activities are to occur.
- Measures should be employed to prevent spills of fuels or lubricants into state waters.

1(d) Requirements. The following is a list of requirements that may be applicable to the proposed disposal and reuse activities:

- A VWPP may be required if state waters, including wetlands, are affected by project activities.
- A wetland delineation must be conducted to determine the location, extent, and type of surface waters present if any construction activities in or near surface waters, including wetlands, result in direct or indirect impacts.
- The JPA must include documentation of all avoidance and minimization efforts and a conceptual plan for appropriate compensatory mitigation.
- Unavoidable impacts to all wetlands greater than 1/10 acre or to streams in excess of three hundred linear feet will require compensation through the

purchase of mitigation bank credits or through the creation, enhancement or preservation of wetlands or streams within the project's watershed.

2. Subaqueous Lands Management. According to the DEIS (page 4-83), proposed marina expansion will include disturbance of bottom sediments for construction of up to 5 docks for up to 100 additional boats. The DEIS (page ES-7) concludes that a range of minor adverse effects and minor beneficial effects would impact water resources including subaqueous lands under the disposal and reuse alternatives.

2(a) Agency Jurisdiction. The Virginia Marine Resources Commission (VMRC), pursuant to Section 28.2-1204 of the Code of Virginia, has jurisdiction over any encroachments in, on, or over any state-owned rivers, streams, or creeks in the Commonwealth. For any development that involves encroachments channelward of ordinary high water along natural rivers and streams, a permit is required from VMRC.

The VMRC serves as the clearinghouse for the Joint Permit Application used by the:

- VMRC for encroachments on or over state-owned subaqueous beds as well as tidal wetlands;
- U.S. Army Corps of Engineers (Corps) for issuing permits pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act;
- DEQ for issuance of a Virginia Water Protection Permit; and
- local wetlands board for impacts to wetlands.

2(b) Conclusion. According to VMRC, if any portion of the disposal and reuse activities involves encroachments channelward of ordinary high water along natural rivers and streams, a permit may be required from the VMRC.

3. Erosion and Sediment Control, and Stormwater Management. According to the DEIS (page 4-56), disposal of Fort Monroe will ultimately lead to limited demolition, site-clearing, and construction activities that could result in increases in erosion potential. Based on an analysis of conceptual development plans from the Reuse Plan (FMFADA 2008), aerial photography analysis, and building metrics, up to 100 acres may ultimately be disturbed from redevelopment, spread over the course of 20 years. The *Virginia Erosion and Sediment Control Handbook* (published by the Virginia Department of Conservation and Recreation) provides guidance for all state erosion and sediment control programs. It covers basic concepts, design, installation, maintenance, plan review procedures, and administrative guidelines to support compliance with the *Virginia Erosion and Sediment Control Law* and *Regulations*.

3(a) Agency Jurisdiction. DCR's Division of Soil and Water conservation administers the *Virginia Erosion and Sediment Control Law and Regulations* (*VESCL&R*) and *Virginia Stormwater Management Law and Regulations* (*VSWML&R*).

3(b) Erosion and Sediment Control Plan.

(i) ***Lands Under Federal Management***

According to the Department of Conservation and Recreation (DCR), the Army and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with *VESCL&R*, *VSWML&R* including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, federal consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the land disturbance of equal to or greater than 2,500 square feet in a Chesapeake Bay Preservation Area (CBPA) would be regulated by *VESCL&R*. Accordingly, the applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. The ESC plan is submitted to the DCR Regional Office that serves the area where the project is located for review for compliance. The Army is ultimately responsible for achieving project compliance through oversight of on site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: VESCL §10.1-567]

(ii) ***Lands Under Local Management***

The property owner is responsible for submitting a project-specific erosion and sediment control (ESC) plan to the City of Hampton for review and approval pursuant to the local ESC requirements, if the project involves a land-disturbing activity of greater than 2,500 square feet in a CBPA. Depending on local requirements the area of land-disturbance requiring an ESC plan may be less. The ESC plan must be approved by the locality prior to any land-disturbing activity at the project site. All regulated land-disturbing activities associated with the project, including on and off site access roads, staging areas, borrow areas, stockpiles, and soil intentionally transported from the project must be covered by the project specific ESC plan. Local ESC program requirements must be requested through the City of Hampton. [Reference: *Virginia Erosion and Sediment Control Law* §10.1-563; *Virginia Erosion and Sediment Control Regulations* 4 VAC 50-30-30 and 4 VAC 50-30-40]

3(c) Stormwater Management Plan.

(i) ***Lands Under Federal Management***

The Army must comply with the *Virginia Stormwater Management Law and Regulations* and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, Federal Consistency under the Coastal Zone Management Act) for construction activities on federal property. Stormwater management plans are submitted to the DCR Regional Office that serves the area where the project is located for review for compliance. [Reference: *Virginia Stormwater Management Act* §10.1-603.3; *Virginia Stormwater Management Program* (*VSMP*) *Permit Regulations* 4 VAC 50-60-110].

(ii) ***Lands Under Local Management***

Dependent on local requirements, a Stormwater Management (SWM) plan may be required. Local SWM program requirements must be requested through the City of Hampton. [Reference: *Virginia Stormwater Management Act* §10.1-603.3; and *Virginia Stormwater Management* (*VSMP*) *Permit Regulations* 4 VAC 50-60-110]

3(d) Virginia Stormwater Management Program General Permit for Stormwater Discharges from Construction Activities. DCR is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program.

(i) ***Lands Under Federal Management***

The operator or owner of construction activities involving land-disturbing activities equal to or greater than 2,500 square feet in areas analogous to the *Chesapeake Bay Preservation Area Designation and Management Regulations* adopted pursuant to the *Chesapeake Bay Preservation Act* are required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the Virginia Stormwater Management Program (VSMP) Permit Regulations.

(ii) ***Lands Under Local Management***

The operator or owner of construction activities involving land disturbing activities greater than 2,500 square feet are required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project specific stormwater pollution prevention plan (SWPPP). Construction activities requiring registration also includes the land-disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will ultimately disturb equal to or greater than one acre. The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the Virginia Stormwater Management Program (VSMP) Permit Regulations.

General information and registration forms for the General Permit are available on DCR's website at: http://www.dcr.virginia.gov/soil_and_water/vsmp.shtml. [Reference: *Virginia Stormwater Management Act* §10.1-603.1 *et seq.*; *VSMP Permit Regulations* 4 VAC-50 *et seq.*]

4. Chesapeake Bay Preservation Areas. According to the DEIS (page 4-80), Resource Protections Areas (RPAs) have been established as a 100 foot buffer zone along the boundary of Fort Monroe. In general, most development is not permitted within the RPA, although there are some types of development that are exempt (e.g., water dependent activities such as a marina, docks, piers; certain types of redevelopment). In addition, there are administrative procedures for considering encroachment waivers within the RPA, which are administered and reviewed by local boards that manage the RPAs. Such restrictions and procedures apply to both baseline conditions under which Fort Monroe currently operates, as well as future use of the installation by other entities.

4(a) Agency Jurisdiction. DCR's Division of Chesapeake Bay Local Assistance (DCBLA) administers the coastal lands management enforceable policy of the VCP which is governed by the *Chesapeake Bay Preservation Act* (*Bay Act*) (*Virginia Code* §10.1-2100-10.1-2114) and *Chesapeake Bay Preservation Area Designation and Management Regulations* (*Regulations*) (9 VAC 10-20 *et seq.*).

4(b) Chesapeake Bay Preservation Areas. According to DCR-DCBLA, while Chesapeake Bay Preservation Areas (CBPA) are not locally designated on federal lands, federal actions on installations located within Virginia designated coastal zone are required to be consistent with the performance criteria of the *Regulations* (9 VAC 10-20-10 *et seq.*) on lands analogous to locally designated CBPAs.

In the City of Hampton, the areas protected by the *Chesapeake Bay Preservation Act*, as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local government. RPAs include:

- tidal wetlands;
- certain non-tidal wetlands;
- tidal shores; and
- a 100-foot vegetated buffer area located adjacent to and landward of the aforementioned features, and along both sides of any water body with perennial flow.

In the City of Hampton, the RPA buffer also includes lands designated as part of the Coastal Barrier Resources System under the Federal Coastal Barrier Resources Act.

RMAs in the City of Hampton, which require less stringent performance criteria, include areas within 100 feet of the inland RPA boundary.

4(c) Performance Criteria. Land-disturbing activities that occur in RMAs are required to meet the general performance criteria as specified in 9 VAC 10-20-120 *et seq.*, with respect to:

- minimizing land disturbance (including access and staging areas);
- retaining indigenous vegetation; and
- minimizing impervious surface.

Furthermore, for land disturbance over 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion & Sediment Control Handbook*, Third Edition, 1992. Finally, project construction must meet stormwater management criteria consistent with water quality protection provisions of the *Virginia Stormwater Management Permit Regulations* (4 VAC-50-60-10).

4(d) Federal Stormwater Management Commitments. The *1998 Federal Agencies' Chesapeake Ecosystem Unified Plan* requires the signatories to fully cooperate with local and state governments in carrying out voluntary and mandatory actions to comply with the management of stormwater. The agencies also committed to encouraging construction design that:

(a) minimizes natural area loss on new and rehabilitated federal facilities;
(b) adopts low impact development and best management technologies for stormwater, sediment and erosion control and reduces impervious surfaces; and

(c) considers the *Conservation Landscaping and Bay-Scapes Guide for Federal Land Managers.*

In addition, the Chesapeake 2000 Agreement committed the government agencies to a number of sound land use and stormwater quality controls. The signatories additionally committed the agencies to lead by example with respect to controlling nutrient, sediment and chemical contaminant runoff from government properties. In December 2001, the Executive Council of the Chesapeake Bay Program issued Directive No. 01-1, *Managing Storm Water on State, Federal and District-owned Lands and Facilities*, which includes specific commitments for agencies to lead by example with respect to stormwater control.

4(e) Findings. Any lands analogous to locally designated CBPAs that might remain federally-owned would remain subject to the requirements in the *Regulations.* Upon transfer, state-held lands and any privately-owned lands would be subject to CBPA designation by the City of Hampton. The proposed reuse alternatives currently include activities such as residential redevelopment, expansion of an existing marina and other uses.

4(f) Requirements. Section 10.1-2114 of the *Bay Act* requires all state agencies to exercise their authorities consistent with local comprehensive plans, zoning ordinances, and subdivision ordinances adopted to comply with the *Bay Act* program and the requirements in the *Regulations.*

Any plans that would include land disturbance, development or redevelopment for a location within CBPAs must be consistent with the requirements in the *Regulations*, and if applicable, City of Hampton ordinances. In particular, the requirements of 9 VAC 10-20-130 must be satisfied, including the provisions limiting land development in the RPA to those structures and uses that are water dependent or constitute redevelopment.

4(g) Conclusion. DCR-DCBLA concludes that the proposed disposal and reuse alternatives at Fort Monroe are consistent with the requirements of the *Chesapeake Bay Preservation Act* and *Regulations*, provided adherence to the above requirements.

5. Air Pollution Control. According to the DEIS (page 4-31), reuse projects could affect air quality in three ways: by generating pollutants during limited demolition and construction; by introducing new stationary sources of pollutants, such as heating boilers and standby generators; and through changes in vehicular traffic that could raise vehicle emission levels locally and possibly regionally. Air quality effects would be considered minor to moderate unless the estimated emissions would not conform to the State Implementation Plan (SIP) or would contribute to a violation of any federal, state, or local air regulations.

5(a) Agency Jurisdiction. DEQ's Air Quality Division, on behalf of the State Air Pollution Control Board, is responsible to develop regulations that become Virginia's *Air Pollution Control Law.* DEQ is charged to carry out mandates of the state law and related regulations as well as Virginia's federal obligations under the *Clean Air Act* as amended in 1990. The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The division ensures the safety and quality of air in Virginia by monitoring and analyzing air quality data, regulating sources of air pollution, and working with local, state and federal agencies to plan and implement strategies to protect Virginia's air quality. The appropriate regional office is directly responsible for the issue of necessary permits to construct and operate all stationary sources in the region as well as to monitor emissions from these sources for compliance. As a part of this mandate, the environmental documents of new projects to be undertaken in the state are also reviewed. In the case of certain projects, additional evaluation and demonstration must be made under the general conformity provisions of state and federal law.

5(b) Agency Comments.

(i) ***National Ambient Air Quality Standards Attainment Status***

According to the DEQ Air Division, Fort Monroe is located in the Hampton Roads ozone (O_3) maintenance area and an emission control area for the contributors to ozone pollution, which are volatile organic compounds (VOCs) and nitrogen oxides (NO_x). Therefore, for activities related to the disposal and reuse alternatives, all reasonable precautions should be undertaken to limit emissions of VOCs and NO_x, principally by controlling or limiting the burning of fossil fuels.

(ii) ***General Conformity Determination***

The DEQ Air Division concurs with the finding in the DEIS that a general conformity determination (GCD) for this action is not required based on the emission analysis contained in the document. Anticipated air emissions during the construction or completion phases are below the GCD threshold of 100 tons per year established for the Hampton Roads area as a maintenance area under the 1997 ozone standard.

(iii) ***Best Management Practices***

The DEQ Air Division supports the best management practices (BMPs) listed in the DEIS (page 4-37), that will be required for construction.

5(c) Requirements.

(i) ***Asphalt Paving Operations***

There are some limitations on the use of "cut-back" (liquefied asphalt cement, blended with petroleum solvents) stemming from 9 VAC 5-40-5490 in the *Regulations for the Control and Abatement of Air Pollution* that may apply to the disposal and reuse alternatives. The asphalt must be "emulsified" (predominantly cement and water with a small amount of emulsifying agent) except when specified circumstances apply. Moreover, there are time-of-year restrictions on its use during the months of April through October in VOC emission control areas.

(ii) ***Fugitive Dust***

During construction, fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 *et seq.* of the *Regulations for the Control and Abatement of Air Pollution.* These precautions include, but are not limited to, the following:

- Use, where possible, of water or chemicals for dust control;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

(iii) ***Open Burning***

If disposal and reuse activities include the burning of construction or demolition material, this activity must meet the requirements under 9 VAC 5-130 *et seq.* of the *Regulations* for open burning, and it may require a permit. The *Regulations* for open burning provide for, but do not require, the local adoption of a model ordinance concerning open burning. The City of Hampton local requirements (if any exist) would apply to future open burning activities.

6. Solid and Hazardous Wastes and Hazardous Materials. The DEIS (page 4-151) states that Fort Monroe does not operate as a transporter or disposal/treatment facility of hazardous wastes. Wastes are transported off-site for disposal. A private collector collects all solid waste, and no active landfills are located on the installation.

6(a) Agency Comments. DEQ's Waste Division finds that both solid and hazardous waste issues and sites were addressed in the report. The report includes a search of waste-related data bases. A geographic information system (GIS) database search did

not reveal any waste sites within a half mile radius that would impact or be impacted by project activities.

6(b) Data File Search. The Waste Division performed a cursory review of DEQ data files and determined that there is one hazardous waste site (VA5210020603, Department of the Army-Ft. Monroe, VA, large quantity generator) and one formerly used defense site (FUDS) (C03VA0103, VA9799F1583, Ft. Monroe/Ft. Wool area, Hampton) located within the same zip code, however their proximity to the subject site is unknown.

6(c) Waste Management. Any soil that is suspected of contamination or wastes that are generated during construction-related activities must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. All demolition and construction waste, including excess soil, must be characterized in accordance with the *Virginia Hazardous Waste Management Regulations* prior to disposal at an appropriate off-site facility.

6(d) Asbestos-containing Material and Lead-based Paint. All structures being demolished or removed, should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, state regulations 9 VAC 20-80-640 for ACM and 9 VAC 20-60-261 for LBP must be followed.

6(e) Recommendations. The DEQ Office of Remediation Programs (ORP), Federal Facilities Program (FFP) offers the following recommended changes to the DEIS.

- **Page 4-151, Section 4.13.1.3**-The second paragraph in this section indicates that Dog Beach landfill and the 200 Area landfill are presently IRP sites 01 and 02 respectively. However, these were *formerly* IRP Sites 01 and 02. They are still IRP sites but the number for Area 200 has changed according to the Installation Action Plan (IAP). This section states that although the IAP lists the sites as closed, both sites will be evaluated further from an ecological perspective in a future Ecological Technical Memorandum. This sentence should be clarified to note that Area 200 is also being investigated in the Supplemental Site Inspection (SI) from both a human health and ecological risk perspective. Dog Beach is being investigated in a Remedial Investigation (RI). This will include both a human health and ecological risk assessment.
- **Page 4-153, Section 4.13.1.4**-The last paragraph states that sites are being investigated under either the IRP process or under the CERCLA expanded SI process. However, the SI process is part of the IRP process.
- **Page 153, Section 4.13.1.4**- DEQ has concerns with historic contamination that may have been conveyed to Mill Creek and the Moat via stormwater outfalls.

DEQ has recommended multi-media sampling adjacent to these stormwater outfalls.

- **Page 4-154, Table 4.13-3**-Sites currently under investigation should also include: Former Fire Training Pit; Former Rifle Range; Former East Pistol Range; Former Skeet Range; Former Target Range; Former Auto Craft Shop; Lumber Storage Site; Former Wastewater Treatment Plant; Former Gas Station; Former Building 76 Tanks; Post Engineer Shops, Asphalt Plant, and Oil House; and Dog Beach Landfill.
- **Page 4-155, Table 4.13-4**-The status/cleanup for the Battery Range Fans specifies "Outside installation boundary." This could be construed that nothing will be done under the Fort Monroe program to address them. DEQ's understanding is that the cleanup of these range fans is being deferred. The Army is responsible for investigation and possible remedial action. Given the desire to transfer the land quickly the focus is currently on terrestrial and near shore munitions. The range fans will be addressed at a later date. The status/cleanup column should be clarified on the table.
- **Page 4-156, Section 4.13.1.4.**-The following comment was made in the MMRP section, "Buried MEC items have been found onshore and there is a potential that MEC is present offshore at Fort Monroe, including in the moat surrounding the fort." The use of the word "potential" in regard to the moat is misleading since MEC has been identified in the moat. Also, this statement conflicts with information provided in the table on page 4-155. The last paragraph in this section states, "For the protection of human health, land use controls, including dig restrictions must remain in place site-wide until the investigation, and if necessary, remediation, of MEC is completed both on- and offshore as well as in all near shore/offshore areas of Fort Monroe that may be used for recreational purposes, including swimming and boating (FMFADA 2008). Dig restrictions and construction support may remain in perpetuity as deed restrictions (Pinkoski 2009)." It should be noted that the cleanup team has agreed that there will be a deed restriction on all Fort Monroe property. The nature of the restriction (i.e. the level of construction support required) will vary by area depending on the results of investigations.
- **Page 4-157, Storage Tanks**-A focus of this section is on regulated underground storage tanks (USTs) and aboveground storage tanks (ASTs). No statement(s) were provided with regard to *unregulated* tanks or tanks that have been closed in-place/abandoned. The document should include information (dates/locations/methods) on tanks that have been abandoned in-place.
- **Page 4-157, Lead and Lead-Based Paint (LBP)**-The section states, "Army policy is to manage LBP in place unless it poses a hazard." DEQ understands that a Fort Monroe policy prohibits base residents from cultivating/consuming vegetables from garden areas which are not raised beds. Fort Monroe staff stated that this policy was due to the presence of LBP in area soils around base residences.

- **Page 4-157, Polychlorinated Biphenyls (PCBs)**-Additional investigation of PCBs may be required under the IRP.
- **Page 4-158, Pesticides and Herbicides-**The DEH yard is still under investigation under the IRP.

The DEQ Waste Division also recommends the Army consider the following measures for the disposal and reuse alternatives:

- Access the following web sites for additional information on hazardous waste and FUDS sites listed above using their identification numbers:
  - http://www.epa.gov/superfund/sites/cursites/index.htm or
  - http://oaspub.epa.gov/enviro/ef_home2.waste
- Implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated for construction projects and facilities. All generation of hazardous wastes should be minimized and handled appropriately.

7. Petroleum Storage Tanks. According to the DEIS (page 4-157), the Fort Monroe historical database shows that 164 current and former petroleum USTs, ranging in capacity from 500 to 15,000 gallons, have been located on the post. The tanks were used for heating fuel, diesel, and gasoline. There are currently 32 active petroleum ASTs ranging from 250 to 30,000 gallons capacity, including six portable tanks that are integral parts of emergency power generators. Five of these tanks are regulated by DEQ because of their size and contents.

7(a) Petroleum Storage Tank Cleanups. According to DEQ-TRO, there have been 14 petroleum releases reported at Fort Monroe, all of which are closed cases. Petroleum contaminated soils or groundwater generated during construction of this project must be characterized and disposed of properly.

7(b) Requirements. Disposal and reuse activities must comply with the following requirements of the Storage Tank Program.

- The relocation, removal or closure of any regulated aboveground or underground petroleum storage tank(s) must be reported to DEQ TRO.
- If evidence of a petroleum release is discovered during implementation of the project, it must be reported to DEQ-TRO.
- If the construction of this project will include the use of portable ASTs (>660 gallons) for equipment fuel, these tank(s) must be registered with DEQ-TRO using AST Registration form 7540-AST. This form is available at the DEQ web site at www.deq.virginia.gov.

8. Herbicides and Pesticides. DEQ recommends that the use of herbicides or pesticides for construction or landscape maintenance should be in accordance with the principles of integrated pest management. The least toxic pesticides that are effective in controlling the target species should be used. Contact the Department of Agriculture and Consumer Services at (804) 786-3501 for more information.

9. Natural Heritage Resources. According to the DEIS (page 4-78), a coordination letter was sent to the Department of Conservation and Recreation requesting information on sensitive species known to occur or potentially occurring, on or in the vicinity of Fort Monroe (DEIS, Appendix E).

9(a) Agency Jurisdiction. The mission of the Virginia Department of Conservation and Recreation is to conserve Virginia's natural and recreational resources. DCR supports a variety of environmental programs organized within seven divisions including the Division of Natural Heritage. The Natural Heritage Program's (DCR-DNH) mission is conserving Virginia's biodiversity through inventory, protection, and stewardship. The *Virginia Natural Area Preserves Act*, 10.1-209 through 217 of the *Code of Virginia*, was passed in 1989 and codified DCR's powers and duties related to statewide biological inventory: maintaining a statewide database for conservation planning and project review, land protection for the conservation of biodiversity, and the protection and ecological management of natural heritage resources (the habitats of rare, threatened, and endangered species, significant natural communities, geologic sites, and other natural features).

9(b) Agency Findings. DCR-DNH searched its Biotics Data System for occurrences of natural heritage resources in the project area. Biotics documents the presence of natural heritage resources in the project area. However, due to the scope of the activity and the distance to the resources, DCR-DNH does not anticipate that the proposed disposal and reuse alternatives will adversely impact these natural heritage resources.

9(c) State-listed Plant and Insect Species. The *Endangered Plant and Insect Species Act of 1979*, Chapter 39 §3.1-1020 through 1030 of the *Code of Virginia*, as amended, authorizes the Virginia Department of Agriculture and Consumer Services (VDACS) to conserve, protect, and manage endangered and threatened species of plants and insects. The VDACS Virginia Endangered Plant and Insect Species Program personnel cooperates with the U.S. Fish and Wildlife Service (USFWS), DCR-DNH and other agencies and organizations on the recovery, protection or conservation of listed threatened or endangered species and designated plant and insect species that are rare throughout their worldwide ranges. In those instances where recovery plans, developed by USFWS, are available, adherence to the order and tasks outlined in the plans are followed to the extent possible.

Under a Memorandum of Agreement established between VDACS and DCR, DCR represents VDACS in comments regarding potential impacts on State-listed threatened and endangered plant and insect species. DCR finds that the current activity will not affect any documented State-listed plants or insects. VDACS finds that no listed threatened or endangered plant and insect species are documented to occur in the vicinity of the project area, based on information in VDACS' database. VDACS does not anticipate the proposed action will have significant adverse effects as it relates to its responsibilities for the preservation of and protection of listed endangered and threatened plant and insect species.

9(d) State Natural Area Preserves. DCR files do not indicate the presence of any State Natural Area Preserves under the agency's jurisdiction in the project vicinity.

9(e) Recommendations. DCR-DNH recommends that DCR-DNH, Rene Hypes at (804) 371-2708 be contacted for an update on natural heritage information if a significant amount of time passes before the proposed action is initiated since new and updated information is continually added to Biotics.

10. Wildlife Resources and Protected Species. According to the DEIS (page 4-78), a coordination letter was sent to the Department of Game and Inland Fisheries requesting information on state-listed threatened, endangered, or candidate species known to occur or potentially occurring, on or in the vicinity of Fort Monroe (DEIS, Appendix E).

10(a) Agency Jurisdiction. The Department of Game and Inland Fisheries (DGIF), as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state or federally listed endangered or threatened species, but excluding listed insects (*Virginia Code* Title 29.1). The DGIF is a consulting agency under the *U.S. Fish and Wildlife Coordination Act* (16 U.S.C. sections 661 *et seq.*), and provides environmental analysis of projects or permit applications coordinated through DEQ and several other state and federal agencies. DGIF determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce, or compensate for those impacts.

10(b) Agency Comments. DGIF offers the following information on species under its jurisdiction found in the area of Fort Monroe.

(i) ***Listed Sea Turtles***

According to DGIF records, the federally-listed endangered Kemp's Ridley sea turtle and leatherback sea turtle, and federally-listed threatened loggerhead sea turtle have been documented from the project area. However, these records appear to be stranding records and do not represent nesting sites. These turtles are known to

inhabit Virginia's coastal areas and waters from May 15 through October 31 of any year. It does not appear that any of the proposed closure/disposal actions are likely to impact these species.

(ii) ***Listed Avian Species***

DGIF documents the state-listed threatened peregrine falcon, gull-billed tern and bald eagle, and the federally-listed threatened piping plover from Fort Monroe. However these records appear to be the result of a visual and auditory survey performed by the U.S. Fish and Wildlife Service (USFWS) on site and do not represent nesting locations. Therefore, DGIF does not anticipate any of the proposed alternatives will result in adverse impacts upon these listed species.

(iii) ***Anadromous Fish Use Area***

The James River has been designated an Anadromous Fish Use Area. Based on the location of Fort Monroe in relation to the designated river reach, DGIF does not anticipate that any of the proposed actions will result in adverse impacts upon this resource.

(iv) ***Colonial Waterbird Colony***

DGIF documents a colonial waterbird colony at the southern tip of Fort Monroe and on the Hampton Roads Bridge Tunnel. DGIF does not anticipate the proposed actions to impact this resource.

10(c) Recommendations. DGIF recommends the following:

- coordinate with the USFWS regarding the protection of federally-listed avian species;
- coordinate with the USFWS and National Marine Fisheries Service (NMFS) regarding the protection of federally-listed sea turtles; and
- coordinate all future development of this site with DGIF and the USFWS to ensure the protection of listed species known from the general project area.

10(d) Conclusion. DGIF concludes that it is difficult at this time to make any determination about what, if any impacts, may be associated with future development or use of the site as final decisions about what the use might be have not been made. However, assuming adherence to strict erosion and sediment controls during demolition or ground disturbance, DGIF finds the proposal consistent with the fisheries management enforceable policy of the Virginia Coastal Resources Management Program under its jurisdiction.

Contact Amy Ewing, DGIF at (804) 367-2733, for additional information regarding these comments.

11. Shellfish Resources.

11(a) Agency Jurisdiction. The Virginia Department of Health's (VDH) Division of Shellfish Sanitation (DSS) is responsible for protecting the health of the consumers of molluscan shellfish and crustacea by ensuring that shellfish growing waters are properly classified for harvesting, and that molluscan shellfish and crustacea processing facilities meet sanitation standards. The mission of this Division is to minimize the risk of disease from molluscan shellfish and crustacea products at the wholesale level by classifying shellfish waters for safe commercial and recreational harvest; by implementing a statewide regulatory inspection program for commercial processors and shippers; and by providing technical guidance and assistance to the shellfish and crustacea industries regarding technical and public health issues.

11(b) Agency Comments. VDH-DSS notes that the shellfish beds in the waters of Hampton Roads and Mill Creek at Fort Monroe are currently classified as "condemned." However, the shellfish beds in the waters on the Chesapeake Bay side of the base are classified as "approved." Therefore, shellfish may be harvested for direct marketing or relay in the waters of the Chesapeake Bay at Fort Monroe, but not from the waters of Hampton Roads and Mill Creek.

11(c) Agency Findings. VDH-DSS finds that the disposal and reuse alternatives would have minimal, if any, effect on the approved waters to the east (Chesapeake Bay), while waters to the west (Mill Creek and Hampton Roads) are presently condemned to shellfish harvesting per administrative action.

11(d) Agency Conclusion. VDH-DSS would not oppose the federal action for the disposal and reuse of Fort Monroe.

Contact Keith Skiles, VDH-DSS at (804) 864-7479 for additional information.

12. Geologic and Mineral Resources. According to the DEIS (page 4-55) Fort Monroe lies on the mid-Atlantic coastal plain in a region where geology is influenced by the Eocene-epoch impact crater. Fort Monroe is situated at the outer rim of the crater on approximately 568 acres of marine terrace. At approximately 1,000 feet below the surface is the upper layer of the debris from the impact that fell back into the open crater. Above that lie the sedimentary layers that have been deposited over the ensuing millennia. The DEIS does not indicate that the proposed disposal and reuse alternatives would significantly impact geologic and mineral resources.

12(a) Agency Jurisdiction. The mission of the Department of Mines, Minerals and Energy (DMME), Division of Mineral Resources (DMR) is to enhance the development and conservation of energy and mineral resources in a safe and environmentally sound manner to support a more productive economy in Virginia. Serving as Virginia's geological survey, DMME-DMR generates, collects, compiles, and evaluates geologic data, creates and publishes geologic maps and reports, works cooperatively with other state and federal agencies, and is the primary source of information on geology, mineral and energy resources, and geologic hazards for both the mineral and energy industries and the general public. DMME-DMR also provides the necessary geologic support for those divisions of DMME that regulate the permitting of new mineral and fuel extraction sites, miner safety, and land reclamation.

12(b) Conclusion. DMME anticipates that the proposed action would have no significant impact to mineral resources.

For additional information, contact Matt Heller, DMME at (434) 951-6351.

13. Transportation Impacts. According to the DEIS (page 4-126), the affected transportation environment includes the roadway network internal to Fort Monroe and the external street network in the City of Hampton. Within the city limits, the primary roadways of concern in the Phoebus community are along Mallory Street between I-64 and Mercury Boulevard. There are three main roadways at the south gate entrance to Fort Monroe, McNair Drive, Ingalls Road, and Stillwell Drive. There are also two other major collector roads which traverse the fort, Fenwick Road and Patch Road. Additionally, there are many local neighborhood streets forming the internal roadway network. The document (page ES-7), anticipates mostly a range of minor to significant adverse effects to transportation under the disposal and reuse alternatives.

13(a) Agency Jurisdiction. The Virginia Department of Transportation (VDOT) provides comments pertaining to potential impacts to existing and future transportation systems.

13(b) Agency Comments. VDOT responded directly to the Army on the DEIS for the disposal and reuse of Fort Monroe in an October 22, 2009 letter (attached). In summary, VDOT is concerned that some of the previous comments provided to the Army in a November 4, 2008 letter from the Virginia Secretary of Transportation and a January 9, 2009 letter from the VDOT Hampton Roads District Administrator have not been satisfactorily addressed in the DEIS. Those comments address the need to discuss alternate transportation modes, the development of a Transportation Demand Management Plan, an analysis of I-64 impacts and the development of an internal

residential capture rate. The VDOT response also includes specific questions on figures, tables, appendices and data contained the DEIS traffic study.

For more information, contact Melanie Allen, VDOT at (804) 786-5360.

14. Water Supply. The DEIS (page 4-139) states that water is supplied to Fort Monroe by the Newport News Water Works (NNWW). The document (page 4-145) concludes that although infrastructure is reported to be in generally good condition, long-term redevelopment of Fort Monroe will require some upgrades to existing systems as well as extensions to redevelopment areas for water infrastructure.

14(a) Agency Jurisdiction. The Virginia Department of Health (VDH), Office of Drinking Water (ODW) reviews projects for the potential to impact public drinking water sources (groundwater wells, springs and surface water intakes).

14(b) Agency Findings. VDH finds that there are no groundwater sources within one mile of the project site and no surface water sources within five miles. The project site is not located in Zone 1 or Zone 2 of any public surface water sources. For public surface water intakes Zone 1 is the area included within a 5-mile radius around the surface water intake and Zone 2 is the entire up-gradient area of the watershed. For public groundwater wells Zone 1 is an area included within a 1,000-foot radius the well and Zone 2 is a radius of one mile. VDH-ODW finds that there are no anticipated impacts to public drinking water resources as a result of the project.

14(c) Requirement. Potential impacts to public water distribution systems must be verified with the local utility.

Contact Diedre Forsgren, VDH at (804) 864-7241 for additional information.

15. Wastewater Treatment Systems. According to the DEIS (page 4-141), in November 2008, the City of Hampton Wastewater Department performed a cursory inspection of the wastewater collection system components at Fort Monroe that focused on a review of manhole structures and pumping stations. The city determined that a more detailed study of the manhole structures and pumping stations needs to be performed and that a closed-circuit video inspection of at least several sanitary sewer mains is also necessary. These studies, although not yet scheduled, are intended to better understand the condition of these system components as it considers providing operation and maintenance services to the FMFADA for these systems.

15(a) Discharging Sewer System Regulations. Installation of sanitary sewer lines must comply with the State's Sewerage Regulations. DEQ has approval authority over plans and specifications for most discharging sewage collection systems and treatment

works, except for single family home (<1000 gpd) systems. This authority is contained in the Sewage Collection and Treatment (SCAT) Regulations (12 VAC 5-581).

15(b) Recommendation. Contact DEQ's Tidewater Regional Office concerning the construction of the new facilities.

15(c) Requirement. Potential impacts to sanitary sewage collection systems must be verified by the local utility.

16 Historic Structures and Archaeological Resources. According to the DEIS (page 4-98), the Virginia State Historic Preservation Office (SHPO) has been sent a letter describing this proposed BRAC action. In addition, a Programmatic Agreement (PA) was finalized in March 2009. The signatories are the Virginia SHPO, the Advisory Council on Historic Preservation (ACHP), the Commonwealth of Virginia, the FMFADA, and National Park Service (NPS). Much of the PA concerns repair, maintenance, or other alteration of buildings, structures, or landscapes considered to be contributing elements to the National Historic Landmark (NHL) District. The PA also directs the Army to: complete a viewshed analysis to identify significant viewsheds from and toward the NHL; complete draft National Register of Historic Places (NRHP) nomination forms as required; complete a Cultural Landscape Study; revise the NHL District boundaries; conduct additional archaeological testing as stated in the PA, and additional tasks.

16(a) Agency Jurisdiction. The Department of Historic Resources (DHR) conducts reviews of projects to determine their effect on historic structures or cultural resources under its jurisdiction. DHR, as the designated State's Historic Preservation Office (SHPO), ensures that federal actions comply with Section 106 of the *National Historic Preservation Act of 1966* (*NHPA*), as amended, and its implementing regulation at 36 CFR Part 800. The *NHPA* requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places. Section 106 also applies if there are any federal involvements, such as licenses, permits, approvals or funding.

16(b) Agency Comments. DHR concurs that the Army has entered into a Programmatic Agreement with the DHR, Advisory Council, FMFADA, the Commonwealth and NPS for the disposal of Fort Monroe.

16(c) Conclusion. DHR concludes that, other than fulfilling the terms of the PA, the *Section 106* process for the undertaking is complete.

17. Local Review.

17(a) Agency Jurisdiction. In accordance with CFR 930, Subpart A, § 930.6(b) of the *Federal Consistency Regulations*, DEQ, on behalf of the state, is responsible for securing necessary review and comment from other state agencies, the public, regional government agencies, and local government agencies, in determining the Commonwealth's concurrence or objection to a federal consistency certification.

17(b) Local Comments. The City of Hampton responded directly to the Army on the DEIS for the disposal and reuse of Fort Monroe. The city finds that the draft document appears to have both the comprehensive scope and a sufficient level of detail to provide a through assessment of the Army's pending disposal of the property and the plans for reuse as envisioned by the Fort Monroe Federal Area Development Authority. The city notes the significant economic, historical, and cultural presence of Fort Monroe within the nearby community, the city and the Hampton Roads region.

The city's comments are attached, and primarily address anticipated transportation impacts of the proposal.

Contact James Oliver, Hampton City Manager at (757) 727-6392 for additional information.

18. Regional Planning Area.

18(a) Agency Jurisdiction. In accordance with the Code of Virginia, Section 15.2-4207, planning district commissions encourage and facilitate local government cooperation and state-local cooperation in addressing, on a regional basis, problems of greater than local significance. The cooperation resulting from this is intended to facilitate the recognition and analysis of regional opportunities and take account of regional influences in planning and implementing public policies and services. Planning district commissions promote the orderly and efficient development of the physical, social and economic elements of the districts by planning, and encouraging and assisting localities to plan, for the future.

18(b) Agency Comments. The Hampton Roads Planning District Commission (HRPDC) reviewed the DEIS and contacted the City of Hampton. According the HRPDC, some of the modifications proposed by the FMFADA include the potential expansion of the existing marina, alterations to entrances, and other projects that may require additional review for impacts to coastal lands, wetlands or other issues. However, the proposed transfer of Fort Monroe appears to be consistent with local and regional plans and policies. HRPDC supports efforts to maintain the historic fort and to provide opportunities for public access. HRPDC also encourages adherence to the

Secretary of Interior's Standards for Rehabilitation for projects that will include adaptive reuse of historic buildings within and outside of the fort.

For additional information contact Dwight Farmer, HRPDC at (757) 420-8300.

19. Pollution Prevention. DEQ advocates that principles of pollution prevention be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site Best Management Practices (BMPs) will help to ensure that environmental impacts are minimized. However, pollution prevention techniques also include decisions related to construction materials, design, and operational procedures that will facilitate the reduction of wastes at the source.

19(a) Recommendations. We have several pollution prevention recommendations that may be helpful in future construction projects and in the operation of facilities:

- Consider development of an effective Environmental Management System (EMS). An effective EMS ensures that facilities are committed to minimizing environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and it recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program.
- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider contractors' commitment to the environment (such as an EMS) when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for infrastructure construction and design. These could include asphalt and concrete containing recycled materials, and integrated pest management in landscaping, among other things.
- Integrate pollution prevention techniques into the facility maintenance and operation, to include the following: inventory control (record-keeping and centralized storage for hazardous materials), product substitution (use of non-toxic cleaners), and source reduction (fixing leaks, energy-efficient HVAC and equipment). Maintenance facilities should be designed with sufficient and suitable space to allow for effective inventory control and preventative maintenance.

DEQ's Office of Pollution Prevention provides information and technical assistance relating to pollution prevention techniques and EMS. For more information, contact DEQ's Office of Pollution Prevention, Sharon Baxter at (804) 698-4344.

20. Energy Conservation. Future construction should be planned and designed to comply with state and federal guidelines and industry standards for energy conservation and efficiency. For example, the energy efficiency of the facility can be enhanced by maximizing the use of the following:

- thermally-efficient building shell components (roof, wall, floor, windows, and insulation);
- facility siting and orientation with consideration towards natural lighting and solar loads
- high efficiency heating, ventilation, air conditioning systems;
- high efficiency lighting systems and daylighting techniques; and
- energy-efficient office and data processing equipment.

Please contact Matt Heller, Department of Mines, Minerals, and Energy at (434) 951-6351 for additional information.

21. Water Conservation. The following recommendations will result in reduced water use.

- Grounds should be landscaped with hardy native plant species to conserve water as well as lessen the need to use fertilizers and pesticides.
- Convert turf to low water-use landscaping such as drought resistant grass, plants, shrubs and trees.
- Low-flow toilets should be installed in new facilities. Otherwise, offset older toilets with a plastic jug of pebbles and water to minimize flushing.
- Consider installing low flow restrictors and aerators to faucets.
- Improve irrigation practices by:
    - upgrading sprinkler clock; water at night, if possible, to reduce evapotranspiration (lawns need only 1 inch of water per week, and do not need to be watered daily; overwatering causes 85% of turf problems);
    - installing a rain shutoff device; and
    - collecting rainwater with a rain bucket or cistern system with drip lines.
- Consider replacement of old equipment such as washers and dishwashers with new high-efficiency machines to reduce water useage by 30-50% per use.
- Check for and repair leaks (toilets and faucets) during regular routine maintenance activities.

FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities located inside or outside of Virginia's designated coastal management area that can have reasonably foreseeable effects on coastal resources or coastal uses must, to the

maximum extent practicable, be implemented in a manner consistent with the Virginia Coastal Resources Management Program (VCP) (also called the Virginia Coastal Zone Management Program). The VCP consists of a network of programs administered by several agencies. The DEQ coordinates the review of federal consistency determinations with agencies administering the Enforceable and Advisory Policies of the VCP. A federal consistency determination for the proposed action was submitted on October 2, 2009 and includes an analysis of the enforceable policies and the advisory policies of the VCP.

Federal Consistency Public Participation

In accordance with 15 CFR § 930.2, public notice of the proposed action was published on DEQ's web site from October 9, 2009 to October 30, 2009. No public comments were received in response to the notice.

Federal Consistency Concurrence

Based on our review of the Army's consistency determination, and the comments and recommendations submitted by agencies administering the enforceable policies of the VCP, DEQ concurs that this proposal is consistent with the VCP. However, other state approvals which may apply to this project are not included in this concurrence. Therefore, the Army must ensure that this project is constructed and operated in accordance with all applicable federal, state, and local laws and regulations.

REGULATORY AND COORDINATION NEEDS

1. Water Quality and Wetland Impacts. Water quality and wetland impacts associated with this proposal will require a Virginia Water Protection Permit issued by the DEQ Tidewater Regional Office pursuant to Virginia Code §62.1-44.15:5. A wetland delineation utilizing methods outlined in the 1987 Corps delineation manual should be prepared and confirmed by the Corps. Both the delineation and the subsequent confirmation by the Corps should clearly identify the presence of all wetlands, not just those deemed "jurisdictional" under the Clean Water Act. A Joint Permit Application may be obtained from and submitted to VMRC which serves as a clearinghouse for the joint permitting process involving the VMRC, DEQ, Corps, and local wetlands boards. For additional information and coordination regarding the VWPP, contact Bert Parolari (DEQ-TRO) at (757) 518-2166.

2. Subaqueous Lands. Any subaqueous lands impacts may be subject to the permitting requirements from the Virginia Marine Resources Commission (VMRC), pursuant to Section 28.2-1200 *et seq.* of the *Code of Virginia.* Any impacts will be reviewed by VMRC with the submission of the Joint Permit Application. For additional information, contact Elizabeth Murphy, VMRC at (757) 247-8027.

3. Erosion and Sediment Control and Stormwater Management.

3(a) Erosion and Sediment Control and Stormwater Management. Future development must be conducted in compliance with *Virginia's Erosion and Sediment Control Law* (Virginia Code 10.1-567) and *Regulations* (4 VAC 50-30-30 *et seq.*) and *Stormwater Management Law* (Virginia Code 10.1-603.5) and *Regulations* (4 VAC 3-20-210 *et seq.*). Activities that disturb 2,500 square feet or more of land would be regulated by VESCL&R and VSWML&R. The Army is encouraged to contact DCR's Suffolk Regional Office at (757) 925-2468, for assistance with developing or implementing any future ESC plans to ensure project conformance. ESC and SWM plan review and approval for future private development should be requested through the City of Hampton.

3(b) Virginia Stormwater Management Program General Permit for Stormwater Discharges from Construction Activities. For projects involving land-disturbing activities 2,500 square feet or more in Chesapeake Bay Preservation Areas, project applicants are required to develop a project-specific stormwater pollution prevention plan and apply for registration coverage under the Virginia Stormwater Management Program General Permit for Discharges of Stormwater from Construction Activities. Specific questions regarding the Stormwater Management Program requirements should be directed to Holly Sepety, DCR, at (804) 225-2613.

4. Chesapeake Bay Preservation Areas. The Army must ensure that disposal and reuse activities located within lands analogous to Chesapeake Bay Preservation Areas are consistent with the *Chesapeake Bay Preservation Area Designation and Management Regulations* (9 VAC 10-20 *et seq.*), to be consistent with the coastal lands management enforceable policy of the VCP. Upon transfer, state and privately held lands would be subject to CBPA designation by the City of Hampton. For additional information and coordination, contact Joan Salvati, DCR-DCBLA, at (804) 225-3440.

5. Air Quality Regulations. The disposal and reuse alternatives may be subject to air regulations administered by the Department of Environmental Quality. The following sections of Virginia Administrative Code are applicable:

- 9 VAC 5-40-5490 *et seq.* for asphalt paving operations;
- 9 VAC 5-50-60 *et seq.* governing fugitive dust emissions;
- 9 VAC 5-130 *et seq.* for open burning.

Fuel-burning equipment may require permitting under regulations (9 VAC 5-80-2000 *et seq.*) for new and modified sources. For additional information and coordination, contact Jane Workman, DEQ-TRO at (757) 518-2112. Also, contact the Accomack County for any local requirements on open burning.

6. Solid and Hazardous Wastes. All solid waste, hazardous waste, and hazardous materials must be characterized and managed in accordance with all applicable federal, state, and local environmental regulations. Some of the applicable state laws and regulations are:

- *Virginia Waste Management Act* (Code of Virginia Section 10.1-1400 *et seq.*);
- *Virginia Hazardous Waste Management Regulations* (*VHWMR*) (9 VAC 20-60);
- *Virginia Solid Waste Management Regulations* (*VSWMR*) (9 VAC 20-80); and
- *Virginia Regulations for the Transportation of Hazardous Materials* (9 VAC 20-110).

Some of the applicable Federal laws and regulations are:

- *Resource Conservation and Recovery Act* (*RCRA*) (42 U.S.C. Section 6901 *et seq.*);
- Title 40 of the Code of Federal Regulations; and
- U.S. Department of Transportation Rules for Transportation of Hazardous materials (49 CFR Part 107).

6(a) Asbestos-Containing Material. It is the responsibility of the owner or operator of a demolition activity, prior to the commencement of the demolition, to thoroughly inspect the affected part of the facility where the operation will occur for the presence of asbestos, including Category I and Category II nonfriable asbestos containing material (ACM). Upon classification as friable or non-friable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 *et seq.*). Contact the DEQ Waste Management Program for additional information, (804) 698-4021, and the Department of Labor and Industry, Ronald L. Graham at (804) 371-0444.

6(b) Lead-Based Paint. If applicable, the proposed project must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations. For additional information regarding these requirements contact the Department of Professional and Occupational Regulation, David Dick at (804) 367-8588.

7. Storage Tanks. If evidence of a petroleum release is discovered as a result of disposal and reuse activities, contact the DEQ Tidewater Regional Office, Lynne Smith at (757) 518-2055 or Gene Siudyla at (757) 518-2117.

The use of portable fuel AST(s) with a capacity of greater than 660 gallons, the tank(s) must be registered with DEQ using *AST Registration Form 7540-AST*. Tank

registration may be accomplished by contacting Tom Madigan, DEQ Tidewater Regional Office, at (757) 518-2115 or by e-mail at temadigan@deq.virginia.gov.

8. Protected Species. Disposal and reuse activities should be coordinated closely with the U.S. Fish and Wildlife Service, National Marine Fisheries Service and the Virginia Department of Game and Inland Fisheries to ensure that impacts on protected species including shorebirds, sea turtles and marine mammals are adequately avoided and minimized. For additional information, contact Amy Ewing, DGIF at (804) 367-2211.

9. Historic and Archaeological Resources. In accordance with Section 106 of the *National Historic Preservation Act*, as amended, and its implementing regulation 36 CFR 800, this proposed action must be carried out in compliance with the Programmatic Agreement between the Army, DHR, Advisory Council, FMFADA, the Commonwealth and NPS. For additional information and coordination, contact Marc Holma, DHR at (804) 367-2323, ext. 114.

10. Regulations for Waterworks Operation. All utility work involving installation of new water lines and appurtenances must comply with the Waterworks Regulations and all applicable standards of the locality. The applicant should contact the public utility for specific procedures and to obtain any necessary permits. For more information, contact the Department of Health's Southeast Virginia Field Office at (757) 683-2000.

11. Sewage Regulations. If applicable, contact James McConathy, DEQ-TRO at (757) 518-2165 to ensure compliance with Virginia's sewerage regulations.

Thank you for the opportunity to review the Draft Environmental Impact Statement and Federal Consistency Determination for the BRAC 2005 Disposal and Reuse of Fort Monroe in the City of Hampton. Detailed comments of reviewing agencies are attached for your review. Please contact me at (804) 698-4325 or John Fisher at (804) 698-4339 for clarification of these comments.

Sincerely,

Ellie Irons, Manager
Office of Environmental Impact Review

Enclosures

Ec: Michelle Hollis, DEQ-TRO
Paul Kohler, DEQ-Air
Kotur Narasimhan, DEQ-Waste

Dave Davis, DEQ-Water
Robbie Rhur, DCR
Tony Watkinson, VMRC
Amy Ewing, DGIF
Keith Tignor, VDACS
Matt Heller, DMME
Barry Matthews, VDH
Todd Groh, VDF
Melanie Allen, VDOT

Cc: Roger Kirchen, DHR
James Oliver, City of Hampton
Dwight Farmer, HRPDC

WASTE DIVISION

OFFICE OF REMEDIATION PROGRAMS

MEMORANDUM

TO: Durwood Willis

FROM: Pat McMurray
Eric Salopek
Kyle Newman

DATE: September 25, 2009

SUBJECT: Fort Monroe EIS Comments

We have reviewed the Draft Environmental Impact Statement (EIS) with emphasis on Section 4.13, Hazardous and Toxic Substances and have the following comments.

1. Page 4-151, Section 4.13.1.3:

The second paragraph in this section indicates that Dog Beach landfill and the 200 Area landfill are presently IRP sites 01 and 02 respectively. This sentence should state that they were formerly IRP Sites 01 and 02. These are still IRP sites but the number for Area 200 has changed according to the Installation Action Plan (IAP).

This section also states that although the IAP lists the sites as closed, both sites will be evaluated further from an ecological perspective in a future Ecological Technical Memorandum. This sentence needs to be clarified. Area 200 is also being investigated in the Supplemental Site Inspection (SI) from both a human health and ecological risk perspective. Dog Beach is being investigated in a Remedial Investigation (RI). This will include both a human health and ecological risk assessment.

1. Page 4-153, Section 4.13.1.4: The last paragraph states that sites are being investigated under either the IRP process or under the CERCLA expanded SI process. This sentence is unclear since the SI process is part of the IRP process.

2. Page 153, Section 4.13.1.4: As communicated to Ft. Monroe staff on several occasions, the VDEQ has concerns with historic contamination that may have been conveyed to Mill Creek and the Moat via stormwater outfalls. The VDEQ has recommended multi-media sampling adjacent to these stormwater outfalls.

3. Page 4-154, Table 4.13-3: Sites currently under investigation should also include:

Former Fire Training Pit
Former Rifle Range
Former East Pistol Range
Former Skeet Range
Former Target Range
Former Auto Craft Shop
Lumber Storage Site
Former Wastewater Treatment Plant
Former Gas Station
Former Building 76 Tanks
Post Engineer Shops, Asphalt Plant, and Oil House
Dog Beach Landfill

4. Page 4-155, Table 4.13-4: The status/cleanup for the Battery Range Fans specifies "Outside installation boundary." This could be construed that nothing will be done under the Ft. Monroe program to address them. VDEQ's understanding is that the cleanup of these range fans is simply being deferred- the Army will still be responsible for investigation and possible remedial action. Given the desire to transfer the land quickly the focus is currently on terrestrial and near shore munitions. The range fans will be addressed at a later date. The status/cleanup column should be clarified on this table.

5. Page 4-156, Section 4.13.1.4,:

   The following comment was made in the MMRP section: "Buried MEC items have been found onshore and there is a potential that MEC is present offshore at Ft. Monroe, including in the moat surrounding the fort." The use of the word "potential" in regard to the moat is misleading since MEC has been identified in the moat. Also, this statement conflicts with information provided in the table on page 4-155 of this draft EIS.

   The last paragraph in this section states that "For the protection of human health, land use controls, including dig restrictions must remain in place site-wide until the investigation, and if necessary, remediation, of MEC is completed both on- and offshore as well as in all near shore/offshore areas of Fort Monroe that may be used for recreational purposes, including swimming and boating (FMFADA 2008). Dig restrictions and construction support may remain in perpetuity as deed restrictions (Pinkoski 2009)." It should be noted that the cleanup team has agreed that there will be a deed restriction on all Ft. Monroe property. The nature of the restriction (i.e. the level of construction support required) will vary by area depending on the results of investigations.

6. Page 4-157, Storage Tanks: A focus of this section is both UST/AST regulated tanks. No statement(s) were provided with regard to unregulated tanks or tanks that have been closed in-place/abandoned. Ft. Monroe should provide information (dates/locations/methods) on tanks that have been abandoned in-place.

7. Page 4-157, Lead and Lead-Based Paint: This section stated "Army policy is to manage LBP in place unless it poses a hazard." The VDEQ was made aware of a Ft. Monroe policy which prohibits base residents from cultivating/consuming vegetables from garden areas which are

not considered *raised beds*. Ft. Monroe staff stated that this policy was due to the presence of LBP in area soils around base residences.

8. Page 4-157, Polychlorinated Biphenyls (PCBs): Note that additional investigation of PCBs may be required under the IRP.

9. Page 4-158, Pesticides and Herbicides: Note that the DEH yard is still under investigation under the IRP.

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
ENVIRONMENTAL IMPACT REVIEW COMMENTS

RECEIVED
OCT 09 2009
DEQ-Office of Environmental Impact Review

October 9, 2009

PROJECT NUMBER: **09-187F**

PROJECT TITLE: Disposal and Reuse of Fort Monroe

As Requested, TRO staff has reviewed the supplied information and has the following comments:

Petroleum Storage Tank Cleanups:
There have been 14 petroleum releases reported at Fort Monroe, all of which are closed cases. If evidence of a petroleum release is discovered during the implementation of this project, it must be reported to DEQ. Contact Ms. Rebecca Gehring at (757) 518-2190 or Mr. Gene Siudyla at (757) 518-2117. Petroleum contaminated soils and ground water generated during the project must be properly characterized and disposed of properly.

Petroleum Storage Tank Compliance/Inspections:
The removal, closure, re-location or installation of any regulated petroleum storage tank (s) must be reported to the DEQ Tidewater Regional Office – 5636 Southern Blvd., Virginia Beach, VA 23462. Attn: Tom Madigan (757) 518-2115.

Virginia Water Protection Permit Program (VWPP):
This document clearly identifies the presence of surface water/wetland resources on Fort Monroe which may be impacted as a result of redevelopment or reuse of this facility in the future. While this document also clearly addresses compliance with Section 404 of the Clean Water Act via consultation with the USACE, (page 4-85, lines 23-41) it makes no reference to any such compliance with state surface water/wetland requirements that are independent of Section 404 and may, in fact be more encompassing both spatially and with respect to regulated activities, ie isolated wetlands, excavation etc. This document should be revised to indicate that DEQ will be included in any coordination and subsequent permitting determinations regarding impacts to surface waters, including wetlands as defined in State law.

Air Permit Program :
No comments.

Water Permit Program :
Ground Water – No Comment.

VPDES Water Permit Section – No Comment. There does not appear to be an impact of permits under our jurisdiction on this project.

Waste Permit Program :
All remedial and demolition waste, including soil, must be characterized in accordance with the Virginia Hazardous Waste Management Regulations prior to disposal at an appropriate off-site facility. Oversight of the evaluation and remedial action is being conducted by the

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
ENVIRONMENTAL IMPACT REVIEW COMMENTS

October 9, 2009

PROJECT NUMBER: **09-187F**

PROJECT TITLE: Disposal and Reuse of Fort Monroe

Department's Federal Facility Program. It is understood that site 2 200 Area Landfill is currently under investigation as part of the IRP/MMRP program. However, it is listed as a Category 3 site eligible for transfer.

The staff from the Tidewater Regional Office thanks you for the opportunity to provide comments.

Sincerely,

Michelle R. Hollis
Environmental Specialist
5636 Southern Blvd.
VA Beach, VA 23462
(757) 518-2146
mrhollis@deq.virginia.gov

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

October 26, 2009

Ms. Robin Mills
Director, Directorate of Public Works
318 Cornog Lane
Fort Monroe, VA 23651

RE: Draft Environmental Impact State (DEIS) for Disposal and reuse of Fort Monroe, Virginia

Dear Ms. Mills:

DEQ has reviewed the information provided concerning the above-referenced project. According to the report for this DEIS, the proposed action is to dispose of the nonreverting property generated by the Base Closure and Realignment Commission (BRAC) mandated closure of Fort Monroe. The nonreverting property does not include all property within Fort Monroe. When the Army ceases to use Fort Monroe for national defense purposes, ownership of approximately 290-acres of "reverting property" granted by the 1838 and 1936 deeds will automatically pass from the United States (U.S.) to the Commonwealth of Virginia. Upon such occurrence, the Commonwealth will have the same titles that it granted to the U.S. Reuse of nonreverting property at Fort Monroe by others is a secondary action resulting from disposal. In addition to disposal alternatives for the proposed action, three reuse intensities are evaluated as secondary actions on nonreverting property to be disposed. The proposed action for this installation will be the disposal and reuse of surplus nonreverting property. The Fort Monroe Reuse Plan includes official policies, land use concepts and limits, and fundamental planning principles as well as strategies related to preservation, economics, tourism, environment, transportation, infrastructure, and flood control.

Under the no action alternative, the Army would continue operations at Fort Monroe at levels similar to those occurring prior to the BRAC Commission's recommendation for closure. However, implementation of this alternative is not possible in light of the BRAC closure recommendation's having the force of law.

Under the Early Transfer Alternative, the Army has available various property transfer and disposal methods that allow the reuse of the property to occur before environmental remedial action has been completed. This method of early disposal, allowable under the provision of Section 120 (h)(3)(C) of CERCLA, would be to defer the requirement to complete all necessary environmental cleanup prior to the transfer of the property and parcels could become available for redevelopment and reuse sooner under this disposal alternative than under any other. This provision, known as early transfer authority (ETA), authorizes the deferral of the CERCLA covenant requiring Army to warrant that all remedial actions have been completed. Virginia's governor must concur with the deferral request for property at Fort Monroe. In the long-term, any redevelopment activities at Fort Monroe will principally focus on renovation of existing structures located within highly disturbed areas, as well as limited expansion of development and impervious surface.

Under the Traditional Disposal Alternative, the Army would transfer or dispose of property once environmental remediation is completed for individual parcels of the installation. Under traditional disposal, if a particular long-term environmental remedy is deemed to be working and approved, the Army may transfer the land while holding continuing obligations for limited environmental actions, such as continued monitoring, five-year review, and continued operation of remedy systems (such as a groundwater recovery system. Effects similar to those described in the early transfer alternative would be expected to occur, but farther in the future.

As shown in Figure 4.8-1 of the DEIS, Fort Monroe has a small tidal marsh area located at the northern extremity of the installation that is associated with Mill Creek. This marsh area is approximately 85 acres in size, of which 67 acres are within Fort Monroe's boundaries.

According to the report (page 4-65), "there would be minor adverse impacts on the installation's surface waters and wetlands as a result of increased runoff, impervious surfaces, and disturbance caused by construction. Roadways will be expanded in some cases and additional parking will be provided to accommodate expected increases in traffic." In addition, on page 4-85, a northern entrance may be constructed at some point, which would impact less than one acre of wetland habitat for road and bridge construction in order to provide improved access to and from Buckroe and Fort Monroe, and to accommodate underground infrastructure upgrades. The exact alignment of this connection will be determined in collaboration with the City of Hampton.

In accordance with the Fort Monroe Reuse Plan dated August 20, 2008, known and potential concerns include munitions releases and disposal, hazardous substance releases and solid waste disposal, petroleum hydrocarbon releases, and asbestos, lead-based paint, and other hazardous materials in buildings. Areas of known and potential concern must be adequately investigated so that environmental cleanup decisions can be determined. Consequently, the results of any water quality sampling need to be submitted and evaluated to determine whether the conclusion that the above listed contaminants do not warrant further treatment.

Since the Army is uncertain of the exact type of activities that may occur with the disposal and reuse of Fort Monroe, DEQ is unable to determine the potential impacts to wetlands, if any. If State waters, including wetlands, are proposed to be impacted the project activities, a Virginia Waters Protection (VWP) permit may be required, and the project proponent should coordinate with the DEQ Tidewater Regional Office for final permit determination. Compensation for unavoidable impacts may also be required.

If any activities, including construction, indirectly or directly impact surface waters (including wetlands) then a wetland delineation should be conducted to determine the location, extent, and type of surface waters present. Coordination of this project should be conducted with the Virginia Marine Resources Commission, the Army Corps of Engineers and the Department of Environmental Quality (DEQ) through the Joint Permit Application (JPA) process. The JPA must include documentation of all avoidance and minimization efforts and a conceptual plan for appropriate compensatory mitigation. Avoidance and minimization of wetland impacts should occur to the maximum extent practicable. Please continue close coordination with DEQ regarding mitigation options as they are considered and developed. Please note that if portions of the project fall under CERCLA, then those portions do not require a VWP permit. However, federal facilities are encouraged to complete a JPA to make certain that all of the appropriate substantive parts of the VWP regulation have been addressed. If portions of the project fall under RCRA, then a VWP permit may be required for potential impacts to surface waters, including wetlands.

Unavoidable impacts to all wetlands greater than 1/10 acre or to streams in excess of three hundred linear feet will require compensation through the purchase of mitigation bank credits or through the creation, enhancement or preservation of wetlands or streams within the project's watershed. Any temporary impact should be restored to their original contours and revegetated with the same or similar species.

If necessary, consider using a work bridge rather than a causeway to reduce temporary impacts.

Since state and federal threatened and endangered species have been identified in the near proximity of the project, we suggest continued coordination with the Department of Game and Inland Fisheries as well as the Department of Conservation and Recreation and/or the U.S. Fish and Wildlife Service regarding presence of endangered or threatened species and/or habitat, prior to seeking a permit from the DEQ.

Please coordinate appropriately for any permits associated with the Virginia Pollutant Discharge Elimination System (VPDES) process for any potential discharges. The Office of Remediation Programs in the Waste Division has reviewed the above referenced project and comments are attached to this letter.

In addition to water quality concerns, we recommend strict adherence to erosion and stormwater management practices, and further encourage the project proponent to monitor any construction activities to make certain that erosion and stormwater management practices are adequately preventing sediment and pollutant migration into surface waters, including wetlands.

Should you have any questions, please feel free to contact me at michelle.henicheck@deq.virginia.gov or 804-698-4007.

Sincerely,

Michelle Henicheck

Michelle Henicheck, PWS
Wetland Ecologist
Office of Wetlands and Water Protection

Cc: Ellie Irons, Office of Environmental Impact Review
Bert Parolari, Tidewater Regional Office
Durwood Willis, Office of Remediation Programs, Waste Division
Eric Salopek, Office of Remediation Programs, Waste Division

L. Preston Bryant, Jr.
Secretary of Natural Resources

Joseph H. Maroon
Director

RECEIVED
NOV 04 2009
DEQ-Office of Environmental Impact Review

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-6124

MEMORANDUM

DATE: October 26, 2009

TO: John Fisher, DEQ

FROM: Robert S. Munson, Planning Bureau Manager, DCR-DPRR

SUBJECT: DEQ 09-187F, DOA, Public Notice for Reuse of Fort Monroe

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

Biotics documents the presence of natural heritage resources in the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

In addition, our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Shirl Dressler at (804) 367-6913.

Division of Chesapeake Bay Local Assistance

In the City of Hampton, the areas protected by the *Chesapeake Bay Preservation Act*, as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local government. RPAs include tidal wetlands, certain non-tidal wetlands and tidal shores, and a minimum 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow. In the City of Hampton, the RPA buffer also includes lands designated as part of the Coastal Barrier Resources System under the Federal Coastal Barrier Resources Act. RMAs, which require less stringent performance criteria, include those areas of the City within 100 feet of the inland RPA boundary.

Pursuant to the *Coastal Zone Management Act of 1972*, as amended, federal activities affecting Virginia's coastal resources or coastal uses must be consistent with Virginia's Coastal Zone Management Program (CZM Program) (see § 307(c)(1) of the Coastal Zone Management Act and 15 CFR Part 930, sub-part C of the *Federal Consistency Regulations*).

While Chesapeake Bay Preservation Areas (CBPA) are not locally designated on federal lands, this does not relieve federal agencies of their responsibility to be consistent with the provisions of the Regulations, § 9 VAC 10-20-10 et seq., as one of the enforceable programs of the CZM Program. Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated CBPAs. Projects that include land disturbing activity must adhere to the general performance criteria, especially with respect to minimizing land disturbance (including access and staging areas), retaining indigenous vegetation and minimizing impervious cover. For land disturbance over 2,500 square feet, projects must comply with the requirements of the *Virginia Erosion and Sediment Control Handbook*, Third Edition, 1992. Additionally, stormwater management criteria consistent with water quality protection provisions of the *Virginia Stormwater Management Regulations*, § 4 VAC 50-60-10, shall be satisfied.

The 1998 *Federal Agencies' Chesapeake Ecosystem Unified Plan* requires the signatories to fully cooperate with local and state governments in carrying out voluntary and mandatory actions to comply with the management of stormwater. The signatory agencies also committed to encouraging construction design that minimizes natural area loss on new and rehabilitated federal facilities, adopts low impact development and best management technologies for storm water, sediment and erosion control, and reduces impervious surfaces. In addition, the *Chesapeake 2000* agreement committed the government agencies to a number of sound land use and stormwater quality controls. The signatories additionally committed the agencies to lead by example with respect to controlling nutrient, sediment and chemical contaminant runoff from government properties. In December 2001, the Executive Council of the Chesapeake Bay Program issued *Directive No. 01-1: Managing Storm Water on State, Federal and District-owned Lands and Facilities*, which includes specific commitments for agencies to lead by example with respect to stormwater control.

The Consistency Determination and Environmental Impact Statement address the environmental impacts of closing the Fort Monroe installation and disposing of the federal fee-owned property. Reuse alternatives are included but are conceptual at this stage, dependent upon the structure of future ownership, with any future final site plans requiring review for consistency with the requirements in the Regulations.

Based on the information provided approximately half (288.15 acres) of the area within Fort Monroe will revert to the Commonwealth of Virginia, and the nonreverting portion (282.15 acres) will be disposed of and transferred to new owners through the surplus process. Any lands analogous to locally designated

CBPAs that might remain federally-owned would remain subject to the requirements in the Regulations as described earlier in this memorandum. Upon transfer, State-held lands and any privately-owned lands would be subject to CBPA designation by the City of Hampton. Section 10.1-2114 of the Chesapeake Bay Preservation Act (Act) requires all state agencies to exercise their authorities consistent with local comprehensive plans, zoning ordinances, and subdivision ordinances adopted to comply with the Bay Act Program and the requirements in the Regulations.

While the reuse alternatives that will be chosen for various areas within Fort Monroe are dependent upon the ultimate ownership, it is important to note that these proposed alternatives currently include activities such as residential redevelopment, expansion of an existing marina and other uses. Any plans developed that would include land disturbance, development or redevelopment for a location within CBPAs must be consistent with the requirements in the Regulations , and if applicable, City of Hampton ordinances. In particular, the requirements of § 9 VAC 10-20-130 must be satisfied, including the provisions limiting land development in the RPA to those structures and uses that are water dependent or constitute redevelopment.

The proposed reversion of portions of Fort Monroe to the Commonwealth of Virginia and the transfer of portions to other owners through the surplus process are consistent with the requirements in the Regulations. Provided adherence to the above requirements, the proposed activity would be consistent with the *Chesapeake Bay Preservation Act* and the Regulations.

Division of Soil and Water Conservation

For lands retained under federal management:
The Applicant and their authorized agents conducting regulated land disturbing activities on private and public lands in the state must comply with the Virginia Erosion and Sediment Control Law and Regulations (VESCL&R), Virginia Stormwater Management Law and Regulations including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, Federal Consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbance activities that result in the land-disturbance of greater than 2,500 square feet would be regulated by VESCL&R. Accordingly, the Applicant must prepare and implement erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. The ESC plan is submitted to the DCR Regional Office that serves the area where the project is located for review for compliance. The Applicant is ultimately responsible for achieving project compliance through oversight of on site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: VESCL §10.1-567;].

General Permit for Discharges of Stormwater from Construction Activities in CBPA:
The operator or owner of construction activities involving land disturbing activities equal to or greater than 2,500 square feet in areas designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act are required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the Virginia Stormwater Management Program (VSMP) Permit Regulations. General information and registration forms for the General Permit are available on DCR's website at
http://www.dcr.virginia.gov/soil_and_water/index.shtml

[Reference: Virginia Stormwater Management Law Act §10.1-603.1 et seq.; VSMP Permit Regulations §4VAC-50 et seq.]

The Portions of Fort Monroe converting to local management:
Erosion & Sediment Control:
The property owner is responsible for submitting a project specific erosion and sediment control (ESC) plan to the City of Hampton for review and approval pursuant to the local ESC requirements, if the project involves a land-disturbing activity of greater than 2,500 square feet. Depending on local requirements the area of land-disturbance requiring an ESC plan may be less. The ESC plan must be approved by the locality prior to any land-disturbing activity at the project site. All regulated land-disturbing activities associated with the project, including on and off site access roads, staging areas, borrow areas, stockpiles, and soil intentionally transported from the project must be covered by the project specific ESC plan. Local ESC program requirements must be requested through the City of Hampton. [Reference: Virginia Erosion and Sediment Control Law §10.1-563; Virginia Erosion and Sediment Control Regulations §4VAC50-30-30, §4VAC50-30-40]

Stormwater Management:
Dependent on local requirements, a Stormwater Management (SWM) plan may be required. Local SWM program requirements must be requested through the City of Hampton. [Reference: Virginia Stormwater Management Act §10.1-603.3; Virginia Stormwater Management (VSMP) Permit Regulations §4VAC50-60-110]

General Permit for Discharges of Stormwater from Construction Activities:
The operator or owner of construction activities involving land disturbing activities greater than 2,500 square feet are required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project specific stormwater pollution prevention plan (SWPPP). Construction activities requiring registration also includes the land-disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will ultimately disturb equal to or greater than one acre. The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the Virginia Stormwater Management Program (VSMP) Permit Regulations. General information and registration forms for the General Permit are available on DCR's website at
http://www.dcr.virginia.gov/soil_and_water/index.shtml
[Reference: Virginia Stormwater Management Law Act §10.1-603.1 et seq.; VSMP Permit Regulations §4VAC-50 et seq.]

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: John E. Fisher **DEQ - OEIA PROJECT NUMBER: 09 – 187F**

PROJECT TYPE: ☐ STATE EA / EIR **X FEDERAL EA / EIS** ☐ SCC

☐ CONSISTENCY CERTIFICATION

PROJECT TITLE: DISPOSAL AND REUSE OF FORT MONROE

PROJECT SPONSOR: DOD / U. S. ARMY

PROJECT LOCATION: **X OZONE MAINTENANCE AND EMISSION CONTROL AREA FOR NOX & VOC**

REGULATORY REQUIREMENTSMAY BE APPLICABLE TO: ☐ CONSTRUCTION
X OPERATION

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 F – STAGE II Vapor Recovery
3. ☐ 9 VAC 5-40-5490 et seq. – Asphalt Paving operations
4. **X 9 VAC 5-130 et seq. – Open Burning**
5. **X 9 VAC 5-50-60 et seq. Fugitive Dust Emissions**
6. ☐ 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to_____
7. ☐ 9 VAC 5-50-160 et seq. – Standards of Performance for Toxic Pollutants
8. ☐ 9 VAC 5-50-400 Subpart_____, Standards of Performance for New Stationary Sources, designates standards of performance for the_____
9. ☐ 9 VAC 5-80-10 et seq. of the regulations – Permits for Stationary Sources
10. ☐ 9 VAC 5-80-1700 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
11. ☐ 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
12. ☐ 9 VAC 5-80-800 et seq. Of the regulations – Operating Permits and exemptions. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

All precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_X) during operation.

K. S. Narasimhan

(Kotur S. Narasimhan)
Office of Air Data Analysis **DATE: October 4, 2009**

Fisher,John

From: Ballou,Thomas
Sent: Wednesday, October 21, 2009 9:18 AM
To: Fisher,John
Cc: Irons,Ellie
Subject: RE: Request for Comments on the Disposal and Reuse of Ft. Monroe

John:

Sorry for the delay in getting back to you and I hope this is still of some use. I have reviewed the Fort Monroe DEIS and concur with their finding that a general conformity determination for this project is not required based on the emission analysis contained in the document. This due to the fact that anticipated air emissions during the construction or completion phases are below the GCD threshold of 100 tons per year established for Hampton Roads area as a maintenance area under the 1997 ozone standard.

Also, to the sponsor's credit, best management practices (BMP) are identified that would be implemented during the construction phase of the project under two of the three scenarios.

-----Original Message-----
From: Fisher,John
Sent: Thu 10/1/2009 2:34 PM
To: Ballou,Thomas
Cc:
Subject: FW: Request for Comments on the Disposal and Reuse of Ft. Monroe

Tom:

Here is the original email with our request for comments on the Ft. Monroe EIS. The request is attached and a link to the document is below.

Let me know if you have questions.

John

John E. Fisher
Virginia Department of Environmental Quality
Division of Environmental Enhancement
Office of Environmental Impact Review
629 East Main Street, #633
Richmond, Virginia 23219
(804) 698-4339
(804) 698-4319 fax
NEW EMAIL: john.fisher@deq.virginia.gov
www.deq.virginia.gov

From: Fisher,John
Sent: Friday, September 11, 2009 12:09 PM
To: Hollis,Michelle; Kohler,Paul; Narasimhan,Kotur; Ewing, Amy (DGIF); Tignor, Keith (VDACS); Rhur, Robbie (DCR); Matthews, Barry (VDH); Kirchen, Roger (DHR); Heller, Matthew (DMME); Pam Mason; Groh, Todd (DOF); Allen, Melanie L. (VDOT); Watkinson, Tony (MRC); 'Claire JONES'; Hampton - DLHodges
Subject: Request for Comments on the Disposal and Reuse of Ft. Monroe

Reviewers:

On behalf of the Commonwealth, DEQ is conducting a coordinated review of the Draft Environmental Impact Statement prepared by the U.S. Army for the Disposal and Reuse of Fort Monroe in the City of Hampton. The document is available

for review and download at http://www.hqda.army.mil/acsimweb/brac/nepa_eis_docs.htm. Please review the document and submit any comments by October 9, 2009. You can respond to this email or the project review request form attached.

Please let me know if you have any questions.

Thank you,
John

John E. Fisher
Virginia Department of Environmental Quality
Division of Environmental Enhancement
Office of Environmental Impact Review
629 East Main Street, #633
Richmond, Virginia 23219
(804) 698-4339
(804) 698-4319 fax
NEW EMAIL: john.fisher@deq.virginia.gov
www.deq.virginia.gov

RECEIVED

OCT 22 2009

DEQ-Office of Environmental Impact Review

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

MEMORANDUM

TO: John Fisher, Environmental Program Planner

PWK

FROM: Paul Kohler, Waste Division Environmental Review Coordinator

DATE: October 21, 2009

COPIES: Sanjay Thirunagari, Waste Division Environmental Review Manager; file

SUBJECT: Environmental Impact Report: Disposal and Reuse of Fort Monroe; 09-187F

The Waste Division has completed its review of the Environmental Impact report for the Disposal and Reuse of Fort Monroe project in Hampton, Virginia. We have the following comments concerning the waste issues associated with this project:

Both solid and hazardous waste issues were addressed in the report. The report did include a search of waste-related data bases. A GIS database search did not reveal any waste sites within a half mile radius that would impact or be impacted by the subject site. The Waste Division staff performed a cursory review of its data files and determined that there is one hazardous waste site (VA5210020603, DEPARTMENT OF THE ARMY - FT. MONROE, VA, LQG) and one formerly used defense site (FUDS) (C03VA0103, VA9799F1583, FT MONROE/FT WOOL AREA, HAMPTON) located within the same zip code, however their proximity to the subject site is unknown.

The following websites may prove helpful in locating additional information for these identification numbers: http://www.epa.gov/enviro/html/rcris/rcris_query_java.html. Eric Salopek of DEQ's Federal Facilities Program has been contacted for his review of this determination. His response is attached.

Any soil that is suspected of contamination or wastes that are generated during construction-related activities must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-80); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous materials, 49 CFR Part 107.

Also, all structures being demolished/renovated/ removed should be checked for asbestos-containing materials (ACM) and lead-based paint prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-80-640 for ACM and 9VAC 20-60-261 for LBP must be followed.

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Paul Kohler at (804) 698-4208.

RECEIVED

OCT 22 2009

DEQ-Office of Environmental Impact Review

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

WASTE DIVISION

OFFICE OF REMEDIATION PROGRAMS

MEMORANDUM

TO: Durwood Willis

FROM: Pat McMurray
Eric Salopek
Kyle Newman

DATE: September 25, 2009

SUBJECT: Fort Monroe EIS Comments

We have reviewed the Draft Environmental Impact Statement (EIS) with emphasis on Section 4.13, Hazardous and Toxic Substances and have the following comments.

1. Page 4-151, Section 4.13.1.3:

The second paragraph in this section indicates that Dog Beach landfill and the 200 Area landfill are presently IRP sites 01 and 02 respectively. This sentence should state that they were formerly IRP Sites 01 and 02. These are still IRP sites but the number for Area 200 has changed according to the Installation Action Plan (IAP).

This section also states that although the IAP lists the sites as closed, both sites will be evaluated further from an ecological perspective in a future Ecological Technical Memorandum. This sentence needs to be clarified. Area 200 is also being investigated in the Supplemental Site Inspection (SI) from both a human health and ecological risk perspective. Dog Beach is being investigated in a Remedial Investigation (RI). This will include both a human health and ecological risk assessment.

1. Page 4-153, Section 4.13.1.4: The last paragraph states that sites are being investigated under either the IRP process or under the CERCLA expanded SI process. This sentence is unclear since the SI process is part of the IRP process.

2. Page 153, Section 4.13.1.4: As communicated to Ft. Monroe staff on several occasions, the VDEQ has concerns with historic contamination that may have been conveyed to Mill Creek and the Moat via stormwater outfalls. The VDEQ has recommended multi-media sampling adjacent to these stormwater outfalls.

3. Page 4-154, Table 4.13-3: Sites currently under investigation should also include:

   Former Fire Training Pit
   Former Rifle Range
   Former East Pistol Range
   Former Skeet Range
   Former Target Range
   Former Auto Craft Shop
   Lumber Storage Site
   Former Wastewater Treatment Plant

Former Gas Station
Former Building 76 Tanks
Post Engineer Shops, Asphalt Plant, and Oil House
Dog Beach Landfill

4. Page 4-155, Table 4.13-4: The status/cleanup for the Battery Range Fans specifies "Outside installation boundary." This could be construed that nothing will be done under the Ft. Monroe program to address them. VDEQ's understanding is that the cleanup of these range fans is simply being deferred- the Army will still be responsible for investigation and possible remedial action. Given the desire to transfer the land quickly the focus is currently on terrestrial and near shore munitions. The range fans will be addressed at a later date. The status/cleanup column should be clarified on this table.

5. Page 4-156, Section 4.13.1.4,:

   The following comment was made in the MMRP section: "Buried MEC items have been found onshore and there is a potential that MEC is present offshore at Ft. Monroe, including in the moat surrounding the fort." The use of the word "potential" in regard to the moat is misleading since MEC has been identified in the moat. Also, this statement conflicts with information provided in the table on page 4-155 of this draft EIS.

   The last paragraph in this section states that "For the protection of human health, land use controls, including dig restrictions must remain in place site-wide until the investigation, and if necessary, remediation, of MEC is completed both on- and offshore as well as in all near shore/offshore areas of Fort Monroe that may be used for recreational purposes, including swimming and boating (FMFADA 2008). Dig restrictions and construction support may remain in perpetuity as deed restrictions (Pinkoski 2009)." It should be noted that the cleanup team has agreed that there will be a deed restriction on all Ft. Monroe property. The nature of the restriction (i.e. the level of construction support required) will vary by area depending on the results of investigations.

6. Page 4-157, Storage Tanks: A focus of this section is both UST/AST regulated tanks. No statement(s) were provided with regard to unregulated tanks or tanks that have been closed in-place/abandoned. Ft. Monroe should provide information (dates/locations/methods) on tanks that have been abandoned in-place.

7. Page 4-157, Lead and Lead-Based Paint: This section stated "Army policy is to manage LBP in place unless it poses a hazard." The VDEQ was made aware of a Ft. Monroe policy which prohibits base residents from cultivating/consuming vegetables from garden areas which are not considered *raised beds*. Ft. Monroe staff stated that this policy was due to the presence of LBP in area soils around base residences.

8. Page 4-157, Polychlorinated Biphenyls (PCBs): Note that additional investigation of PCBs may be required under the IRP.

9. Page 4-158, Pesticides and Herbicides: Note that the DEH yard is still under investigation under the IRP.

Fisher,John

From: Ewing, Amy (DGIF)
Sent: Friday, October 23, 2009 8:55 AM
To: Fisher,John
Subject: ESSLog# 26901_09-187F_Disposal and Reuse of Ft. Monroe

We have reviewed the subject project that proposes to close Ft. Monroe, dispose of the excess federal real property interests, and then reuse Ft. Monroe for other purposes, by entities other than the US Army. The reuse plan considers a number of scenarios which are secondary actions to the closure and will be decided upon by other entities.

According to our records, federal Endangered Kemp's Ridley sea turtle, federal Endangered leatherback sea turtle, and federal Threatened loggerhead sea turtle have been documented from the project area. however, these records appear to be stranding records and do not represent nesting sites. These turtles are known to inhabit Virginia's coastal areas/waters from May 15 through October 31 of any year. It does not appear that any of the proposed closure/disposal actions are likely to impact these species. We recommend coordination with the USFWS and NMFS regarding the protection of these federally listed sea turtles associated with the proposed actions at Ft. Monroe.

We also document state Threatened peregrine falcon, federal Threatened piping plover, state Threatened gull-billed tern, and state Threatened bald eagle from Ft. Monroe. However these records appear to be the result of a visual and auditory survey performed by the USFWS on site and do not represent nesting location. Therefore, we do not anticipate any of the currently proposed actions to result in adverse impacts upon these listed species. We recommend coordination with the USFWS regarding the protection of federally listed species.

The James River has been designated an Anadromous Fish Use Area. Based on the location of Ft. Monroe in relation to the designated river reach, we do not anticipate that any of the proposed actions on Ft. Monroe will result in adverse impacts upon this resource.

Further, we document a colonial waterbird colony at the southern tip of Ft. Monroe and on the Hampton Roads Bridge Tunnel. We do not anticipate the proposed actions to impact this resource.

We recommend that all future development of this site be appropriately coordinated with our agency and the USFWS to ensure the protection of listed species known from the general project area. It is difficult at this time to make any determination about what, if any impacts, may be associated with future development or use of the the site as final decisions about what the use might be have not been made.

Assuming adherence to strict erosion and sediment controls during demolition or ground disturbance, we find this Project consistent with the Fisheries Management Section of the CZMA.

Thanks, Amy

Amy M. Ewing
Environmental Services Biologist
Virginia Dept. of Game and Inland Fisheries
4010 West Broad Street
Richmond, VA 23230
804-367-2211
amy.ewing@dgif.virginia.gov

If you cannot meet the deadline, please notify JOHN E. FISHER at (804) 698-4339 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.

B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.

C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

RECEIVED
NOV 05 2009
DEQ-Office of Environmental Impact Review

Please return your comments to:

MR. JOHN E. FISHER
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX # (804) 698-4319
john.fisher@deq.virginia.gov

JOHN E. FISHER
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

Based on information in our database, no T/E plant and insect species are documented to occur in the vicinity of the project area. At this time, we do not anticipate this project will have significant adverse affect as it relates to VDACS' responsibilities for the preservation of agricultural lands and the protection of listed endangered and threatened plant and insect species.

(signed)_____(date)_____

(title) (Keith R. Tignor) November 5, 2009

(agency) Endangered Species Coordinator

VDACS, Office of Plant and Pest Services

PROJECT # 09-187F **9/09**

RECEIVED
OCT 07 2009
DEQ-Office of Environmental Impact Review

COMMONWEALTH of VIRGINIA

Department of Health
DIVISION OF SHELLFISH SANITATION
109 Governor Street, Room 614-B
Richmond, VA 23219

Ph: 804-864-7487
Fax: 804-864-7481

MEMORANDUM

DATE: 10/7/2009

TO: John E. Fisher
Department of Environmental Quality

FROM: Robert E. Croonenberghs, Ph.D., Director
Division of Shellfish Sanitation

SUBJECT: Disposal and Reuse of Fort Monroe

City / County: Hampton

Waterbody: Hampton Roads, Mill Creek, Chesapeake Bay

Type: ☐ VPDES ☐ VMRC ☐ VPA ☐ VWP ☐ JPA ☑ Other: Environmental Impact Statement (Federal)

Application / Permit Number: 09-187F

☐ The project will not affect shellfish growing waters.

☐ The project is located in approved shellfish growing waters, however, the activity as described will not require a change in classification.

☐ The project is located in condemned shellfish growing waters and the activity, as described, will not cause an increase in the size or type of the existing closure.

☐ The project will affect condemned shellfish waters and will not cause an increase in the size of the total condemnation. However, a prohibited area (an area from which shellfish relay to approved waters for self-purification is not allowed) will be required within a portion of the currently condemned area. See comments.

☐ A buffer zone (including a prohibited area) has been previously established in the vicinity of this discharge, however, the closure will have to be revised. Map attached.

☐ This project will affect approved shellfish waters. If this discharge is approved, a buffer zone (including a prohibited area) will be established in the vicinity of the discharge. Map attached.

☑ Other. The proposed site is within waters currently classified as "condemned" in Hampton Roads and Mill Creek meaning that shellfish may be harvested for direct marketing or relay; and "approved" in the Chesapeake Bay. VDH-DSS would not oppose the "Disposal and Reuse of Fort Monroe" Federal action.

ADDITIONAL COMMENTS: *Adverse effects from site reuse would have minimal if any affect on the approved waters to the east (Chesapeake Bay), while waters to the west (Mill Creek and Hampton Roads) are presently condemned to shellfish harvesting per administrative action.*

Area #: 55, 56

dwp

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting Your and Your Environment
www.vdh.virginia.gov/shellfish

If you cannot meet the deadline, please notify JOHN E. FISHER at (804) 698-4339 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.

B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.

C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR. JOHN E. FISHER
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX # (804) 698-4319
john.fisher@deq.virginia.gov

RECEIVED
NOV 03 2009
DEQ-Office of Environmental Impact Review

JOHN E. FISHER
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

This project poses no significant impact to energy and mineral resources.

(signed) Matt Heller (date) 11/3/09

(title) Geologist Manager

(agency) DMME

PROJECT # 09-187F **9/09**

Fisher,John

From: Forsgren, Diedre (VDH)
Sent: Thursday, September 17, 2009 12:33 PM
To: Fisher,John
Cc: Matthews, Barry (VDH)
Subject: EIS: Disposal & Reuse of Fort Monroe (09-187F)

DEQ Project #: 09-187F

Name: Disposal and Reuse of Fort Monroe

Sponsor: DOD/US Army

Location: City of Hampton

VDH – Office of Drinking Water has reviewed DEQ Project Number 09-187F. Below are our comments as they relate to proximity to **public drinking water** sources (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems must be verified by the local utility.

No groundwater wells are within 1 mile radius of the project site.

No surface water intakes are located within 5 miles radius of the project site.

Project does not fall within Zone 1 or Zone 2 of any public surface water sources.

There are no apparent impacts to public drinking water sources due to this project.

Diedre Forsgren

Office Services Specialist

VIRGINIA DEPARTMENT OF HEALTH

Office of Drinking Water, Room 622-A

109 Governor Street

Richmond, VA 23219

Phone: (804) 864-7241

email: diedre.forsgren@vdh.virginia.gov

9/17/2009

Fisher,John

From: Holma, Marc (DHR)
Sent: Wednesday, November 04, 2009 4:42 PM
To: Kirchen, Roger (DHR); Fisher,John
Subject: RE: Request for Comments on the Disposal and Reuse of Ft. Monroe

John,

Roger passed along to me your request for our comments. The Army has entered into a Programmatic Agreement with the DHR, Advisory Council, FMFADA, the Commonwealth, and NPS for the disposal of Fort Monroe. Other than fulfilling the terms of the PA the Section 106 process for this undertaking is complete.

Marc

From: Kirchen, Roger (DHR)
Sent: Tuesday, November 03, 2009 1:22 PM
To: Holma, Marc (DHR)
Subject: FW: Request for Comments on the Disposal and Reuse of Ft. Monroe

Do you want to provide some statement on the PA, etc. to DEQ on this? Thanks.

Roger

Roger W. Kirchen, Archaeologist
Office of Review and Compliance
Virginia Department of Historic Resources
2801 Kensington Avenue
Richmond, Virginia 23221
phone: (804) 367-2323 x153
fax: (804) 367-2391
web: www.dhr.virginia.gov

From: Fisher,John [mailto:John.Fisher@deq.virginia.gov]
Sent: Tuesday, November 03, 2009 11:46 AM
To: Kirchen, Roger (DHR)
Subject: FW: Request for Comments on the Disposal and Reuse of Ft. Monroe

Roger:

I don't have record of receiving a response from DHR on this one. Let me know if you plan to respond.

Thanks,
John

John E. Fisher
Virginia Department of Environmental Quality
Division of Environmental Enhancement
Office of Environmental Impact Review
629 East Main Street, #633
Richmond, Virginia 23219
(804) 698-4339
(804) 698-4319 fax
NEW EMAIL: john.fisher@deq.virginia.gov
www.deq.virginia.gov

RECEIVED
NOV 06 2009
DEQ-Office of Environmental Impact Review

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1700 North Main Street
SUFFOLK, VIRGINIA 23434

DAVID S. EKERN, P.E.
COMMISSIONER

October 22, 2009

Ms. Robin D. Mills
Director of Public Works
318 Cornog Lane
Hampton, VA 23651

RE: Fort Monroe Draft Environmental Impact Statement

Dear Ms. Mills:

Thank you for the opportunity to review and provide comments on the Fort Monroe Draft Environmental Impact Statement for BRAC 2005 Disposal and Reuse of Fort Monroe (DEIS) dated August 2009. Virginia Department of Transportation (VDOT) staff has reviewed those sections of the DEIS pertaining to the transportation component of this DEIS and offer the following comments:

1) The DEIS indicates the Middle and Upper Bracket redevelopment scenarios will cause "short and long term minor to significant adverse impacts to roadways in the vicinity of Fort Monroe". The DEIS indicates redevelopment of Fort Monroe would result in poor levels of service and extensive queuing at several key intersections. The DEIS does suggest the improvements necessary to mitigate these impacts, but offers no solutions on how these improvements will be funded and implemented.

2) I am concerned previous comments made by Secretary Homer on November 4, 2008 have not been addressed in the DEIS. Comments #4 (providing alternate transportation modes) and #5 (development of a Transportation Demand Management Plan) have not been satisfactorily addressed. I have attached Secretary Homer's letter and ask that it become part of the official record for this EIS.

3) I am concerned previous comments from my January 9, 2009 letter have not been addressed in the DEIS. Comments #3 and #6 (analysis of I-64 impacts) and #4 (internal residential capture rate) have not been satisfactorily addressed. I have attached my January 9, 2009 letter and ask that it become part of the official record for this EIS.

Additional Comments regarding the EIS traffic study are as follows:

1) Does Figure 2 depict Atlantic Avenue as an existing ingress/egress to Ft. Monroe?

2) Data from the Phoebus Neighborhood Planning Study was not seen in the appendix. Was growth applied to these intersections to match 2008 data?

3) Table 11 does not include a growth rate for Interstate 64. Between existing and design year conditions how are the background volumes addressed that use the interstate? Several figures appear to show no growth applied to design year volumes for I-64. Please review. Additional site trips using I-64 should be added to the background traffic and analyzed to determine interstate freeway, merge or diverge operations as appropriate.

4) The report recommends improvements that impact limited access, affect right of way and maintenance of traffic operations along I-64. How will these concerns be addressed? Because of severe congestion in this area, the viability of these improvements as they relate to maintenance of traffic, sequence of construction and road user cost should be noted beyond a conceptual stage for impacts to traffic operations?

5) The appendices should include data to support the 95th queue lengths found in the respective tables.

6) Several delay values for overall intersection increase with the additional of recommended improvements. This seems abnormal. Explain?

7) Considering the segment of links to be a known length. How do the queues of individual movements relate to the available capacity of the approach?

We appreciate your assistance and cooperation for continued success of this effort.

Please notify Mr. Eric Stringfield at 757-925-3669 or Mr. Tom Fahrney at (703) 383-2489 should you have any questions.

Sincerely,

Dennis W. Heuer, P.E.
Hampton Roads District Administrator

Cc: The Honorable Pierce Homer
The Honorable Patrick Gottschalk
The Honorable L. Preston Bryant, Jr.
David S. Ekern
William Armbruster, FMFADA
Tom Fahrney

RECEIVED
NOV 04 2009
DEQ-Office of Environmental Impact Review

City Manager

October 23, 2009

Ms. Robin D. Mills
Director, Directorate of Public Works
318 Cornog Lane
Fort Monroe, VA 23665

RE: Draft Environmental Impact Statement for Disposal and Reuse of Fort Monroe

Dear Ms. Mills:

We appreciate this opportunity to provide the City of Hampton's comments on the draft Environmental Impact Statement for Fort Monroe. We acknowledge the significant level of effort required to identify and evaluate the potential environmental impacts associated with the disposal and reuse of the Fort. The draft document appears to have both the comprehensive scope and a sufficient level of detail to provide a thorough assessment of the Army's pending disposal of the property and the plans for reuse as envisioned by the Fort Monroe Federal Area Development Authority.

The City of Hampton has a great deal of interest in the process of closing this installation and the ultimate future reuse of the property. As stated in the Hampton Community Plan (2006):

> *Fort Monroe has a very significant economic, historical, and cultural presence within the nearby community, the city and the Hampton Roads region. The Fort is also a National Historic Landmark and is listed on the National Register of Historic Places. Identifying the Fort as one of the strategic investment areas in the Community Plan will support the City's efforts to ensure that the Fort remains a positive presence within the community.*

It is with this interest in mind that the City has reviewed the draft EIS and has prepared the attached comments. We look forward to working with you to address these comments and making any changes to the draft EIS that may be warranted. Please contact me or Bruce Sturk in the City Manager's office or Keith Cannady in the Planning Department if you have any questions or if you need any additional information.

Sincerely,

James B. Oliver, Jr.
City Manager

CITY OF HAMPTON (757) 727-6392 FAX (757) 728-3037
22 LINCOLN STREET, HAMPTON, VIRGINIA 23669

"Oldest Continuous English-Speaking Settlement in America - 1610"

Ms. Robin D. Mills
RE: Draft Environmental Impact Statement for Disposal and Reuse of Fort Monroe
October 23, 2009
Attachment

City of Hampton Comments

1. Page 4-85, line 26 – 28. Consider removing statements referring to the likelihood of constructing a northern entrance to the property. As noted on page 4-85, the proposed access road is included in the Fort Monroe Reuse Plan adopted by the FM FADA. This access is also referenced in the City of Hampton's Buckroe Master Plan (2005).

2. Page 4-114, line 30. References to economic impacts here and at a number of other locations in this section of the document note that "these effects would largely be localized, would not effect the ROI (region of influence) equally". This assessment appears to potentially diminish or underestimate the negative economic impacts on the local community. While the region as a whole may suffer negligible economic impacts, it appears that impacts to the local community may be significant. Consider revising this section of the document to provide a more complete assessment of these impacts.

3. Page 4-137, line 4 – 6. In the late 1990's the City completed several streetscape projects on Mallory Street from I-64 to County Street and on Mellen Street from Mallory to the Mellen Street bridge. The project included such features as curb bulb outs, raised crosswalks, and medians. The City will not be undertaking any future projects to convert Mallory Street or Mellen Street into 4-lane roadways. As such, it will not be geometrically possible to create dual northbound left turn lanes on Mellen Street to turn on to westbound Mallory Street.

4. Page 4-137, line 7 – 8. We are in agreement that the addition of an exclusive southbound left turn lane (on I-64 westbound off-ramp to Mallory Street) and addition of a westbound right-turn lane on Mallory Street would improve traffic operations at this intersection. The length of the right turn lane may be very minimal without significant impacts to the business at 236 S. Mallory Street.

5. Page 4-137, line 9 – 10. This is a one lane VDOT controlled off-ramp. The primary existing turning movements are left turns. This recommendation should be reworded to clearly indicate that the existing one lane ramp will need to be widened to accommodate three lanes (dual left turn lanes and one right turn lane).

6. Page 4-137, line 11 – 14. This recommendation should be reworded to clearly identify that the I-64 eastbound off-ramp (which is actually identified as Settlers Landing Road) is to be remarked for 2 left turn lanes, one thru lane, and a shared thru/right lane

7. Page 4-137, line 15 – 17. The City has an ongoing traffic signal timing program and continually updates timings every 3-4 years to reflect current conditions in corridors. The lack of sufficient capacity at the eastbound approach of the Hampton Roads Bridge Tunnel, especially during weekday AM and PM peak hours as well as Saturday and Sundays peak periods will restrict through movements on the mainline of I-64 with or without development. Capacity constraints during the above noted time periods on westbound I-64 at the Hampton Roads Bridge Tunnel also meter flows in the area of the Mallory and Woodland interchanges.

HAMPTON ROADS
PLANNING DISTRICT COMMISSION

BRUCE C. GOODSON, CHAIRMAN • STAN D. CLARK, VICE CHAIRMAN • JAMES O. McREYNOLDS, TREASURER
DWIGHT L. FARMER, EXECUTIVE DIRECTOR/SECRETARY

October 22, 2009

RECEIVED
OCT-26 2009
DEQ-Office of Environmental Impact Review

Mr. John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

Re: Disposal and Reuse of Fort Monroe DEQ #09-187F (ENV:GEN)

Dear Mr. Fisher:

Pursuant to your request, the staff of the Hampton Roads Planning District Commission has reviewed the Draft Environmental Impact Statement and Consistency Determination for the proposed disposal and reuse of Fort Monroe in Hampton. We have contacted the City of Hampton concerning the project.

Based on this review, we offer the following comments. Some of the modifications proposed by the Fort Monroe Federal Area Development Authority (FMFADA) include a potential expansion of the existing marina, alterations to entrances, and other projects that may require additional review for impacts to coastal lands, wetlands, or other issues. However, the proposed transfer of Fort Monroe appears to be consistent with local and regional plans and policies. We support efforts to maintain the historic Fort and to provide opportunities for public access to it. We also encourage adherence to the Secretary of Interior's Standards for Rehabilitation for projects that will include adaptive reuse of historic buildings within and outside of the Fort.

We appreciate the opportunity to review this project. If you have any questions, please do not hesitate to call.

Sincerely,

Dwight L. Farmer

Dwight L. Farmer
Executive Director/Secretary

MLJ/fh

Copy: Mr. Keith Cannady

Note: Emails forwarding letters of comment are not included below. All others are.

-----Original Message-----
From: Delgrosso.Karen@epamail.epa.gov [mailto:Delgrosso.Karen@epamail.epa.gov]
Sent: Monday, September 21, 2009 10:02 AM
To: monr post nepapublic
Subject: DEIS for Disposal and Reuse of Fort Monroe, VA

I would greatly appreciate a paper copy of the subject DEIS for EPA's review.

Please mail/fed ex a copy of the DEIS to the following address:

Karen DelGrosso (3EA30)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Thank you!

Karen DelGrosso

-----Original Message-----
From: Irons,Ellie [mailto:Ellie.Irons@deq.virginia.gov]
Sent: Thursday, September 10, 2009 2:12 PM
To: monr post nepapublic
Cc: Fisher,John
Subject: DEIS for Disposal and Reuse of Fort Monroe

Ms. Robin D. Mills:

I am requesting a hard copy of the DEIS for our files.

The Department of Environmental Quality's Office of Environmental Impact Review is responsible for coordinating Virginia's review of federal environmental documents developed pursuant to NEPA and responding to appropriate federal officials on behalf of the Commonwealth. DEQ is also responsible for coordinating Virginia's review of federal consistency documents submitted pursuant to the Coastal Zone Management Act (CZMA) and providing the state's response.

OEIR received the Public Notice of Availability of the DEIS and one CD.

I checked the distribution list to ensure that all our reviewers received a CD and noticed that list is very outdated, for example the Council on the Environment no longer exist (since 1993). I have attached a current list of state reviewers for your use. When we send out the review request we will send the website for the DEIS and ask reviewers to contact you if they need CDs or hard copies. Thanks.

Ellie Irons
Program Manager
Office of Environmental Impact Review
629 East Main Street, Room 631
Richmond, VA 23219
Telephone: (804) 698-4325
Fax; (804) 698-4319
email address: Ellie.Irons@deq.virginia.gov <mailto:elirons@deq.virginia.gov>
http://www.deq.virginia.gov

-----Original Message-----
From: Delgrosso.Karen@epamail.epa.gov [mailto:Delgrosso.Karen@epamail.epa.gov]
Sent: Wednesday, September 23, 2009 2:43 PM
To: monr post nepapublic
Subject: Fw: DEIS for Disposal and Reuse of Fort Monroe, VA

Please let me know when the paper-copy of the DEIS for Disposal and Reuse of Fort Monroe, VA has been mailed to the address below. Thank you!

Karen DelGrosso (3EA30)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Thank you!

Karen DelGrosso

-----Original Message-----
From: Steven T. Corneliussen [mailto:Corneliussen@jlab.org]
Sent: Tuesday, October 20, 2009 8:59 AM
To: monr post nepapublic; Bill Armbruster
Cc: Perreault, Mark, D.; Samuel Martin; S. Butler; S. Corneliussen; Joanne Berkley; Louis Guy; Sturdevant, Matthew
Subject: Army DEIS deadline wrong?

(Fort Monroe Authority staff, I'd be grateful if you would forward this to an appropriate Army e-mail address. I'm not sure that monr.post.nepapublic@us.army.mil can necessarily draw timely action. Thanks.)
Fort Monroe DEIS question for the Army: You have stated an Oct. 26 deadline for DEIS public comments, but 45 days from the time of the Federal Register notice appears to be Oct. 29. Should your deadline in fact be Oct. 29? Do you plan to change your deadline? Please forgive me if I simply misunderstand something. Thanks.
Steven T. Corneliussen
Cell: 813-6739

-----Original Message-----
From: Valincia_Darby@ios.doi.gov [mailto:Valincia_Darby@ios.doi.gov]
Sent: Tuesday, October 20, 2009 12:15 PM
To: monr post nepapublic
Cc: Tylan_Dean@fws.gov; Lloyd_Chapman@nps.gov
Subject: Comments BRAC Fort Monroe, VA

DOI comments on the subject project is attached. If there are questions feel free to call this office at (215) 597-5378.

Valincia Darby
Regional Environmental Protection Assistant
U.S. Department of the Interior, OEPC
200 Chestnut Street, Rm. 244
Philadelphia, PA 19106
Phone: (215) 597-5378
Fax: (215) 597-9845
Valincia_Darby@ios.doi.gov

-----Original Message-----
From: Web Pages [mailto:webpages2020@yahoo.com]
Sent: Wednesday, October 21, 2009 11:41 PM
To: monr post nepapublic
Subject: Comments on Draft Environmental Impact Statement (DEIS) - Fort Monroe

I believe that in preparing the Draft Environmental Impact Statement (DEIS) for Disposal and Reuse of Fort Monroe, **the Army has not considered Fort Monroe's immense historical importance, but has treated it as it would the average military installation**. Old Point Comfort, which became Fort Monroe in 1823, has been an integral part of American history since the early 1600's. It should continue to be public and serve the American people through its abundance of historical, scenic, and recreational assets. It is ideally suited to become a national park.

The Army needs to consider a wider range of not only "impacts" but also of "alternatives" than what is considered in the Fort Monroe Federal Area Development Authority's Reuse Plan, which, despite the availability of the National Park Service, omits serious consideration of any national park, self-sustaining or otherwise!

I would like to emphasize the following points:

The Army needs to conduct a thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.

The Army needs to respond to the public comments of last fall, which were overwhelmingly in agreement with the concept of a self-sustaining national park.

The Army needs to recognize that Fort Monroe should not be divided up, with portions offered for unnecessary development.

Sincerely,

Adrian Whitcomb
Newport News, VA 23601

-----Original Message-----
From: D.D. Delaney [mailto:namewon@verizon.net]
Sent: Thursday, October 22, 2009 12:44 AM
To: monr post nepapublic
Subject: Fort Monroe National Park!

To Whom It May Concern:

I am writing to express my support for the **conversion of Fort Monroe in Hampton, VA, into a national park** under the jurisdiction of the National Park Service. The area, soon to be relinquished by the U.S. Army, is not only an important historical site but also an environmentally sensitive coastal land mass upon which further real estate development is a foolhardy choice. Please to not let this beautiful shore be opened to the ravages of private enterprise. Rather, hold it in trust for the people, present and, especially, future. Thank you for your consideration.

D.D. Delaney
Norfolk, VA 23503

-----Original Message-----
From: Sandra Canepa [mailto:canepasa@cox.net]
Sent: Thursday, October 22, 2009 1:22 AM
To: monr post nepapublic
Subject: Request a more thorough investigation re Ft Monroe as a National Park
Importance: High

Request the Army do the following through the EIS (Environmental Impact Statement) process:

* Conduct a thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort **Monroe National Park.**

* Respond to the public comments of last fall, which were overwhelming in agreement with the concept of a **self-sustaining national park.**

* Recognize that **Fort Monroe's 500+ acres should not be divided up,** with portions offered for unnecessary private residential and commercial development.

* Recognize that the Army like all entities and States bordering the Chesapeake Bay has a responsibility to **keep the Bay as protected as possible from pollutants that would be generated from massive private over-development** of Fort Monroe's major amount of shoreline, all of which falls within the Bay's watershed. Only with the auspices of the National Park Service can the health of the Chesapeake Bay and the history of Fort Monroe in its entirety be both protected and saved for now and future generations.

Thank you,
Sincerely, Sandra Canepa

-----Original Message-----
From: Amma71043@aol.com [mailto:Amma71043@aol.com]
Sent: Thursday, October 22, 2009 4:46 AM
To: monr post nepapublic
Subject: Fort Monroe

Please:

* Conduct a thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining **Fort Monroe National Park**.

* Respond to the public comments of last fall, which were overwhelming in agreement with the concept of **a self-sustaining national park**.

* Recognize that Fort Monroe should **not be divided up**, with portions offered for unnecessary private residential and commercial development.

Thank you,

Beverly George
Hampton, VA 23664

-----Original Message-----
From: S. Corneliussen [mailto:Corneliussen@Verizon.net]
Sent: Thursday, October 22, 2009 5:52 AM
To: monr post nepapublic; Bill Armbruster; Edwards, Robert Mr CIV USA IMCOM
Cc: Perreault, Mark, D.; Samuel Martin; S. Butler; Joanne Berkley; Louis Guy;

Sturdevant, Matthew
Subject: Re: Army DEIS deadline wrong?

Query for Bob Edwards
Bob, I didn't have your e-address with me when I sent this query (below) about the problem of Oct. 26 vs. Oct. 29 as the DEIS comment deadline. Having heard nothing back, but having your e-address available now, I thought I'd try you. (By the way, I see that another civic organization has already sent out notices that state a DEIS comment deadline of Oct. 29, but if I don't hear back, I plan simply to tell the public that an apparent Army mixup makes it safest to respond by Oct. 26.) Thanks.
Steve Corneliussen

-----Original Message-----
From: Dennis, Joyce D. [mailto:Joyce.Dennis@VDOT.Virginia.gov]
Sent: Thursday, October 22, 2009 12:23 PM
To: monr post nepapublic
Subject: fort Monroe draft environmental

<<Ft Monroe Environmental Impact Stmnt.pdf>> Ms. Mills, Dennis Heuer asked me to email this letter and attached documents to you. The original is being put in the mail today.
Please call if you should have any questions or concerns.
Thank you,

Joyce Davis Dennis
Operations and Maintenance
VDOT, Hampton Roads District
757.925.2505
joyce.dennis@vdot.virginia.gov

-----Original Message-----
From: party2@cox.net [mailto:party2@cox.net]
Sent: Thursday, October 22, 2009 8:55 AM
To: monr post nepapublic
Subject: Save Fort Monroe

To Whom It May Concern,

I respectfully request that when the army leaves Fort Monroe in 2011, that Fort Monroe be **preserved as a public park, with park service representation, that there be a national park** for the public to enjoy and that the land never be divided for any sort of develpment. Fort Monroe has many centuries of history that needs to be preserved and saved, not bulldozed. Thank you...

Linda Counts
Hampton(Buckroe Resident)

-----Original Message-----
From: DS422@aol.com [mailto:DS422@aol.com]
Sent: Thursday, October 22, 2009 10:17 PM
To: monr post nepapublic
Subject: Fort Monroe

I'm writing this to ask the U.S. Army that simply **following the range of alternatives in the Fort Monroe Authority's "Reuse Plan" is not enough.** Involvement of the National Park Service is becoming more of a possibility as state and local governments realize that they cannot handle the costs involved. I believe that in the long run the **greatest economic benefits will come to Virginia and the Hampton Roads region if Fort Monroe becomes a self-sustaining national park, with very limited development,** but there will be substantial startup costs, which only the Federal government can cover.

I call on the U.S. Army to do the following through the EIS (Environmental Impact Statement) process:

* Conduct a thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining **Fort Monroe National Park.**

* Respond to the public comments of last fall, which were overwhelming in agreement with the concept of a **self-sustaining national park.**

* Recognize **that Fort Monroe should not be divided up,** with portions offered for unnecessary development.

Thank you for your time and consideration.

Darryl Schmitt

-----Original Message-----
From: jlbcole@aol.com [mailto:jlbcole@aol.com]
Sent: Thursday, October 22, 2009 1:25 PM
To: monr post nepapublic
Subject: Ft. Monroe as a Self-Sustaining National Park

Please do the following through the EIS (Environmental Impact Statement) process:

* Conduct a thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining **Fort Monroe National Park**.

* Respond to the public comments of last fall, which were overwhelming in agreement with the concept of a **self-sustaining national park.**

* Recognize that **Fort Monroe should not be divided up**, with portions offered for unnecessary private residential and commercial development.

Janet Cole
Concerned Hampton Citizen
-----Original Message-----
From: MCKINLEY BRYANT [mailto:mandmbryant@verizon.net]
Sent: Thursday, October 22, 2009 12:51 PM
To: monr post nepapublic
Subject: Preserve the Treasure - Fort Monroe

U.S. Army,

I am a member of Citizens for a Fort Monroe National Park. I believe **the Federal Government, through the National Park Service should retain ownership of this National Landmark**. The historic importance of Fort Monroe is no different than Williamsburg. The State of Virginia and surely not Hampton have the resources to invest in the start up cost necessary for successful development.

Sincerely,
McKinley Bryant
Hampton, VA 23664-1964

-----Original Message-----
From: Jackie Tate [mailto:sweetrepeats@verizon.net]
Sent: Thursday, October 22, 2009 9:47 AM
To: monr post nepapublic
Subject: Ft Monroe Closing

As a lifelong resident of Hampton and someone who was born at Ft. Monroe, I am writing to voice my wishes for the future Ft. Monroe. I urge the Army to involve **the National Park Service in taking over the base** and keeping it the National treasure that it is. I was at a community meeting just last week where a local historian informed the group the base would be divided into 3 parts, a museum, a rental and development. The City of Hampton and the State of Virginia do not have the resources to sustain a park and it would be disastrous to allow their of these entities to develop the area.

I am also a business owner located just outside the base in Phoebus. I see daily tourist to this area who would love to be able to stroll the base and take in the history and the fabulous views of the Chesapeake. I urge you to consider the preservation of this gem!!

Jackie Tate
Hampton, VA 23663
-----Original Message-----
From: MUMUML3@aol.com [mailto:MUMUML3@aol.com]
Sent: Thursday, October 22, 2009 10:57 PM
To: monr post nepapublic
Subject: Keeping Fort Monroe

I am writing this note in support of keeping **Fort Monroe as a National Park**. I feel the area should remain open to the public for all to enjoy the rich history and beauty I have loved for 60' years. In the 1950's my dads cousin Maj. Gen. Ralph M. Osborne was stationed at Fort Monroe and lived in a beautiful home overlooking Chesapeake Bay. This was the first of many memories I have of the military section. After living in Idaho Falls, Idaho our family returned to Newport News in early 1959. It seems my father was one of 200 that were sent by then NNSB&DDCO. To build the prototype reactor that would be used first in aircraft carriers and then submarines. June of 1959 our family + aunt left Old Point Comfort on the overnight steamer to arrive in downtown Baltimore the next morning. They even took our car! This was a first boat trip for all except my Dad. When the U.S.S. Enterprise left Newport News for the first time, my Dad was on it. We followed the ship all the way to Fort Monroe to bid our Dad, the nuclear reactor and all staff a safe trip. As the years have passed, I have enjoyed the many concerts, weddings and other happenings at Fort Monroe. My daughter age 38 remembers many trips with her grandfather to Fort Monroe. Trips to watch first ships then submarines leave and return the harbor was a passion for my father. My daughter visited the Casemate Museum many times and always liked climbing the steps of the Chamberlin for ice cream. Today, I still like riding around the Fort and remembering. . . .
I'm only one but I know there are many that want the Fort to be kept accessible for all.

Sincerely,
Linda L. Lane, R.N., M.S.N.
mumuml3@aol.com

-----Original Message-----
From: Keith Derby [mailto:keith.derby@jdhudson.net]
Sent: Friday, October 23, 2009 9:22 AM
To: monr post nepapublic
Subject: Ft. Monroe
I have lived on the Peninsula all my life and have spent considerable time at Ft. Monroe. My sister was married in the beautiful Chapel of the Centurion. Ft. Monroe is a historical site that should be saved. We need to work to find a way to utilize Fort Monroe in a way that utilizes the existing facilities and strictly limits new development. **Selling the residences on the fort to private citizens would be one way to privatize them and raise some funding. Strict covenants would require the new owners to maintain the properties in a way that preserves their beauty. The commercial space could be sold for approved business operations such as high tech companies. We need to think outside the box. The world is changing and our federal government cannot and should not be expected to finance the transition.** Ft. Monroe is an asset to the Peninsula that can enhance the quality of life for our citizens. Please work to make certain future development of Ft. Monroe is strictly limited in order to preserve the historical fort for future generations. Ft. Monroe is a gem in the rough and with some planning it can be a beautiful place to live, work and play.

Keith Derby
Yorktown, VA
-----Original Message-----
From: Nancy Miller [mailto:Nancy.Miller@dcr.virginia.gov]
Sent: Friday, October 23, 2009 3:38 PM
To: monr post nepapublic
Cc: David Sacks; Robbie Rhur; Teresa Foggsteed
Subject: DCR contact information

Hello Ms. Mills,
Please remove "Mr. W. Douglas Beisch, Jr. and the Chesapeake Bay Local Assistance Department" from your mailing list. These are no longer valid contact points. The Department has been a Division within the Virginia Department of Conservation and Recreation for several years, so your contact information for the Department will suffice when you distribute materials. Thank you for your attention to this matter; please contact me with any questions and confirm to me via return e-mail when this is done.

Yours truly,
Nancy L. Miller
Senior Environmental Planner
Dept of Conservation & Recreation
Chesapeake Bay Local Assistance
804-225-3441
Toll free 1-800-243-7229
900 E. Main Street
Richmond, VA 23219

-----Original Message-----
From: deanne.beckwith [mailto:deanne.beckwith@cox.net]
Sent: Sunday, October 25, 2009 11:52 AM
To: monr post nepapublic
Subject: Save Ft Monroe

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for **an innovative national park unit,** as previously called for by the public (2) **properly assesses and classifies Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**

Deanne Beckwith
-----Original Message-----
From: Robert Lumsden [mailto:rdlumsden@msn.com]
Sent: Sunday, October 25, 2009 1:55 PM
To: monr post nepapublic
Subject: Fort Monroe National Park

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) **properly assesses and classifies Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**

Robert D. Lumsden
Heathsville, VA 22473
-----Original Message-----
From: BEVSTEVEW@aol.com [mailto:BEVSTEVEW@aol.com]
Sent: Sunday, October 25, 2009 12:30 PM
To: monr post nepapublic
Subject: Help Save Ft Monroe

FYI my husband and I are proud American citizens, retired Civil Service employees, registered Virginia voters, and current Virginia residents. As such, we are compelled to voice our opinions and encourage your support on the future of Fort Monroe.

We agree with the Citizens for a Fort Monroe National Park. We respectfully request the US Army rework the Fort Monroe Draft Environmental Impact Statement (DEIS) so that it (1) includes and fully evaluates the option for an **innovative national park unit,** (2) **properly assesses and classifies Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**

Please make Fort Monroe's future one that we can ALL be proud, based on preserving and sharing our amazing history with the people of Virginia, the United States and the world, and certainly NOT based on individuals' financial or political gain. Thank you for your support.

Sincerely,
Steve & Bev Wills
Gloucester, Virginia

-----Original Message-----
From: Jeanch530@aol.com [mailto:Jeanch530@aol.com]

Sent: Sunday, October 25, 2009 3:06 PM
To: monr post nepapublic
Subject: (no subject)

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it:

I) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public,
2) **properly evaluates and classifies Wherry Quarters baseline conditions,** and
3) **properly evaluates Wherry Quarters reuse impacts.**

Jean C. Hanbury
Portsmouth, VA

-----Original Message-----
From: Scott Gutzke [mailto:sgutzke@sbcglobal.net]
Sent: Sunday, October 25, 2009 3:36 PM
To: monr post nepapublic
Subject: The Future of Fort Monroe

Dear sir or ma'am,

I would like to say that I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

Scott Gutzke
Grayslake, IL

-----Original Message-----
From: E or D [mailto:egsko@yahoo.com]
Sent: Sunday, October 25, 2009 3:51 PM
To: monr post nepapublic
Subject: Fort Monroe

Dear Sirs:

I request that the Army rework the DEIS so that it:
1. Includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public,
2. Properly assesses and classifies **Wherry Quarter baseline conditions**, and,
3. **Properly evaluates Wherry Quarter reuse impacts**.

Dennis Skopik
-----Original Message-----
From: RBen10@aol.com [mailto:RBen10@aol.com]
Sent: Sunday, October 25, 2009 5:23 PM
To: monr post nepapublic
Subject: Rework of the DEIS is needed

I whole heartedly agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the

public, (2) properly assesses and classifies **Wherry Quarter baseline conditions,** and (3) **properly evaluates Wherry Quarter reuse impacts.**

Irene Helterbran Benton
born at Fort Monroe in 1941

-----Original Message-----
From: RussMixer@aol.com [mailto:RussMixer@aol.com]
Sent: Sunday, October 25, 2009 5:46 PM
To: monr post nepapublic
Subject: save Fort Monroe

To the US Army:

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions,** and (3) **properly evaluates Wherry Quarter reuse impacts.**

Thank you.

Russell L. Gary

-----Original Message-----
From: Douglas Haller [mailto:dhaller26@cox.net]
Sent: Sunday, October 25, 2009 7:50 PM
To: monr post nepapublic
Subject: Fort Monroe a National Park

To Whom It may Concern'

I support and agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it:
1-Includes and fully evaluates the option for **a National park unit,** as previously called for by the public. 2.Properly Assesses and classifies **Wherry Quarter baseline conditions** 3.**Properly evaluates Wherry Quarter reuse impacts.**
Thank you for you attention to accomplishing the above.

Sincerely.
Doug Haller
Williamsburg, VA 23185

-----Original Message-----
From: gcl58@aol.com [mailto:gcl58@aol.com]
Sent: Sunday, October 25, 2009 7:51 PM
To: monr post nepapublic
Subject: Fort Monroe National Park

I agree with citizens for a Ft. Monroe National Park that the Army should rewrite the DEIS so that it 1. Includes and fully evaluates the option for an **innovated national park unit,** as previously called for by the public. 2. Properly assesses and clarifies the **Wherry Quarter base line conditions,** and 3. Properly **evaluates the Wherry Quarter reuse impacts.**

George Lawton
Oak Hill, VA 20171

-----Original Message-----
From: LexaLynn Hooper [mailto:LHooper@AUSA.ORG]
Sent: Sunday, October 25, 2009 8:00 PM
To: monr post nepapublic
Subject: Save Ft Monroe

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

Please do not do anything that would change Ft Monoe from what it is a beautiful piece of history that should be preserved. A place where military people lived, where their animals lived and died, where memories still are present for all of us who served at Ft. Monroe.

LexaLynn Hooper
Manager, International and Special Programs
The Association of the U.S. Army
Arlington, VA 22201

-----Original Message-----
From: Karen [mailto:karen.oma@verizon.net]
Sent: Sunday, October 25, 2009 10:54 PM
To: monr post nepapublic
Subject: Fort Monroe Reuse Plan

Please record me as one of the citizens for a Fort Monroe National Park. Please rework your Draft Environmental Impact Statement [DEIS] to include fully exploring and evaluating the option of the entire Fort Monroe site [not just the moated fort] as a **National Park** site. Also, the DEIS should assess and classify the **Wherry Quarter baseline conditions** and fully evaluate Wherry Quarter reuse environmental impact. The northeast "green heart" of the Old Point Comfort site contains wetlands, shoreline, and historical areas that should be preserved, promoted for public use and educational purposes, and accessible to the public, not just for the benefit of one municipality, developers, and a few people who can afford upscale development. This area is priceless, too important to be handed over to "the few", and too historically and environmentally significant to be lost. Once lost, it would not be retrievable.

Thank you for recording my opinion and considering the points I present.

Karen Detweiler, Hampton

-----Original Message-----
From: Sylvia C. Gurganus [mailto:sylvia.gurganus@cox.net]
Sent: Sunday, October 25, 2009 8:49 PM
To: monr post nepapublic
Subject: I agree with Citizens for Fort Monroe National Park!!

I wholeheartedly agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

Thank you for hearing!
Sylvia Gurganus
Newport News, Virginia

-----Original Message-----
From: Herb Fabricius [mailto:otcmcusnret@cox.net]
Sent: Monday, October 26, 2009 6:34 AM
To: monr post nepapublic
Subject: Fort Monroe usage

We agree with the citizens for a Fort Monroe National Park, that the DEIS needs to include the **evaluation of a national park unit** as called for by the public. Also agree that proper evaluation of the **Wherry Quarter baseline and reuse impact** needs to be done in a timely manner.
Respectfully,
Herbert and Kathleen Fabricius
Norfolk, VA.
-----Original Message-----
From: Lynn Wilson [mailto:lynnpeacewilson@gmail.com]
Sent: Monday, October 26, 2009 7:04 AM
To: monr post nepapublic
Subject: Ft Monroe National Park!

I am writing to ask the Army to rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**. I recently visited the area, learned of its history, and agree fully with Citizens for a Fort Monroe National Park. Thank you.
--
Lynn Peace Wilson
Sandston, Virginia 23150
-----Original Message-----
From: Sue Wheeler [mailto:swheeler-bfs@cox.net]
Sent: Monday, October 26, 2009 9:38 AM
To: monr post nepapublic
Subject: Fort Monroe to become a National Park

Please, the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

I own property in Salt Ponds and I am VERY concerned about the future for Fort Monroe. We have a jewel of history sitting in our midst and I for one would hate to see that destroyed or broken into unrecognizable pieces. Please preserve this wonderful fort and keep American history intact for future generations.

Thanks
Sue Wheeler, President/CEO
Bayside Financial Services, LLC
-----Original Message-----
From: Cyndihburton@aol.com [mailto:Cyndihburton@aol.com]
Sent: Monday, October 26, 2009 7:12 AM

To: monr post nepapublic
Subject: Re: Fort Monroe

My family has lived in historic Virginia for hundreds of years. And I've come to appreciate the historic and economic aspects of our rich resources in Virginia. Once an historic treasure is dissimilated, we can never get it back.

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**

Thank you for your support.

Sincerely,
Cyndi Burton
Keswick, VA 22947
-----Original Message-----
From: Wayne & Sally WIlson [mailto:vadare@gmail.com]
Sent: Monday, October 26, 2009 11:31 AM
To: monr post nepapublic
Subject: Fort Monroe DEIS

I am a Virginian interested in the future of Fort Monroe. I want to provide comment on the Draft Environmental Impact Statement. I strongly advocate the National Park option that was earlier espoused by the public. I urge that the Wherry Quarter conditions receive assessment and classification and an evaluation of its reuse impacts.

V/R,
Wayne Wilson
Oak Hill, VA

-----Original Message-----
From: RUDY DARDY [mailto:rdardy@msn.com]
Sent: Monday, October 26, 2009 11:35 AM
To: monr post nepapublic
Subject: save the fort

I am sending this email of my support **for a national Park at Fort Monroe**. My father was in the army for 23 yrs and my sister and I who are twins, were born on Fort Monroe. This fort is history not only for the location but what it meant to the United States. Closing this fort is so devastating to me and my sister that it's like us losing our family. Of all the military bases I have ever lived, I will always remember Fort Monroe, my birthplace. Where will I say I was born after it's gone?
-Rudy Dardy

-----Original Message-----
From: Joanne Rhoads [mailto:jrhoads@pol.net]
Sent: Monday, October 26, 2009 2:26 PM
To: monr post nepapublic
Cc: jrhoads
Subject: Fort Monroe

Dear Army planners:
I am a retired Army Officer who lived at Fort Monroe for several years. I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an innovative national park unit, as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) properly evaluates Wherry Quarter reuse impacts.

Fort Monroe is a historic treasure and its future protection is important for all of us.

Sincerely,

Joanne L. Rhoads, MD
-----Original Message-----
From: Martha Ballman [mailto:mballman@pawv.org]
Sent: Monday, October 26, 2009 11:45 AM
To: monr post nepapublic
Subject: Fort Monroe preservation

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**. Thanks!

Martha Ballman
Preservation Alliance of West Virginia
Cultural Heritage Development
Charleston, WV 25333
-----Original Message-----
From: JFFoltz@aol.com [mailto:JFFoltz@aol.com]
Sent: Monday, October 26, 2009 12:30 PM
To: monr post nepapublic
Subject: Fort Monroe Draft Environmental Impact Statement (DEIS)

Dear Sirs,
I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**

Sincerely,
John F. Foltz
LTC USA Retired
-----Original Message-----
From: Joe Brackin [mailto:brackinJ@aol.com]
Sent: Sunday, October 25, 2009 7:55 PM
To: monr post nepapublic
Subject: DEIS rework

Sirs,

A brief note to inform you that I, as a citizen of Hampton, agree with Citizens for a Fort Monroe National Park, whose position /recommendation is that the Army should rework the DEIS so that it
(1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.
Thank you for the opportunity to express my opinion.
-----Original Message-----
From: clutterman325@cox.net [mailto:clutterman325@cox.net]
Sent: Monday, October 26, 2009 12:12 PM
To: monr post nepapublic
Cc: Corneliussen@Verizon.net
Subject: Fort Monroe to National Park

Please note that I very much agree with the citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it:
1. Includes and fully evaluates the option for an **innovative national part unit**, as previously called for by the public.
2. Properly assesses and classifies Wharry Quarter baseline conditions, and
3. **Properly evaluates Wherry Quarter reuse impacts**.
Thank you,
Lawrence I. Strauss
LTC, USA (Ret)
Newport News, VA 23602

-----Original Message-----
From: Betty Beeler [mailto:beeler@jlab.org]
Sent: Monday, October 26, 2009 2:17 PM
To: monr post nepapublic; Corneliussen, Steven T.
Subject: Save Fort Monroe

Army Post Fort Monroe

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.
I worked at Fort Monroe when it was CONARC. I walked through moat pass and on to my building (G2 O&T) at that time. It was such a pleasure to work at Fort Monroe and hear the Army band practicing right across from my building. Some mornings, I would walk through the moat pass and they would be practicing. It just lifting one's spirit.
Please do what it takes to see our Fort Monroe become a National Park.
Thank you,
Elizabeth S. Beeler (Betty)
-----Original Message-----
From: Marc Bendick [mailto:bendickegan@mindspring.com]
Sent: Monday, October 26, 2009 11:07 AM
To: monr post nepapublic
Subject: Fort Monroe

As I frequent visitor to the Hampton Road area and avid supporter of our nation's history - oriented national parks, I wish to support the position advocated by Citizens for a Fort Monroe National Park that the Army should rework its Draft Environmental Impact Statement to include and fully evaluate the option for an **innovative national park unit,** as previously called for by the public. I also want to urge that the EIS properly assesses and classifies the **Wherry Quarter baseline conditions**, and properly evaluates reuse impacts for the Wherry Quarter, as discussed by Citizens for a Fort Monroe National Park.
Marc Bendick, Jr.
Washington, DC 20016
-----Original Message-----
From: jekoontz@juno.com [mailto:jekoontz@juno.com]
Sent: Monday, October 26, 2009 11:09 AM
To: monr post nepapublic
Subject: Ft. Monroe

Dear Sirs:

Please listen to the Citizens for Ft. Monroe Park and initiate a fully funded national park at this site.

Yours, Jane and Earl Koontz

-----Original Message-----
From: burnette_l@juno.com [mailto:burnette_l@juno.com]
Sent: Sunday, October 25, 2009 8:25 PM
To: monr post nepapublic
Subject: FT Monroe's Future

I am writing to say that I agree with the Citizen's for a Ft Monroe National Park that the Army should rework the DEIS so that it
1) includes and fully evaluates the option for a fully **innovative National Park unit** as previously called for by the public
2) properly assesses and classifies **Wherry Quarters baseline** conditions
3) properly evaluates **Wherry Quarters reuse** impacts This is an opportunity to do the correct thing for the American people by saving and securing a significant part of America's history for the future so that Americans and foreign nationals can visit the post and see how people of several generations lived and worked at Monroe as well as learning the part Monroe played for years in our history. This can be done...the Presidio in CA.is an example...as is Ft McHenry in MD. I am confident that Ft Monroe would be a great success as a National Park. It's history and it's location lend an ambiance, a fascination that would assure it's success. Please appoint Ft Monroe as a National Park...it is absolutely the right thing to do. Margaret D Burnette

-----Original Message-----
From: Joe Brackin [mailto:brackinJ@aol.com]
Sent: Sunday, October 25, 2009 7:55 PM
To: monr post nepapublic
Subject: DEIS rework

Sirs,

A brief note to inform you that I, as a citizen of Hampton, agree with Citizens for a Fort Monroe National Park, whose position /recommendation is that the Army should rework the DEIS so that it
(1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**
Thank you for the opportunity to express my opinion.

-----Original Message-----
From: Prof. Bob Turner [mailto:bobturner@virginia.edu]
Sent: Monday, October 26, 2009 2:50 PM
To: monr post nepapublic
Subject: DEIS on Ft. Monroe, VA

Dear Sir or Madam:

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies Wherry Quarter baseline conditions, and (3) **properly evaluates Wherry Quarter reuse impacts.**

Respectfully,
Robert F. Turner
-----Original Message-----
From: Pbarryhollar@aol.com [mailto:Pbarryhollar@aol.com]
Sent: Monday, October 26, 2009 3:17 PM
To: monr post nepapublic
Cc: Pbarryhollar@aol.com
Subject: DEIS -- Fort Monroe, VA

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public, properly assesses and classifies **Wherry Quarter baseline conditions**, and **properly evaluates Wherry Quarter reuse impacts.**

Paul B Hollar
-----Original Message-----
From: Barbara Smith [mailto:barbaradsmith88@gmail.com]
Sent: Monday, October 26, 2009 6:46 PM
To: monr post nepapublic
Subject: Wherry Quarterpart of Old Point Comfort part of the National Park

To the Army,
When the National Park Service came and analyzed Fort Monroe and Old Point Comfort, their conclusion was that indeed it is deserving of being a National Park. What better evidence do you need. It is vitally important to keep it all green and open to the public, utilizing the existing buildings in an appropriate way. It would be a gem of a National Park and holding historic treasures that many in the country would come to visit.

I thank you for all you are doing to clean up and get ready for the transition in 2011.
Barbara Drucker Smith
-----Original Message-----
From: michael w. mcclure [mailto:mmcclure@cox.net]
Sent: Monday, October 26, 2009 7:53 PM
To: monr post nepapublic
Subject: DEIS

I agree with the Citizens for a Fort Monroe National Park that you should rework the draft environmental impact statement. to include and fully evaluate the option for an **innovative national park unit,** as previously called for by the public, properly assess and classify **Wherry Quarter baseline conditions** and properly evaluate Wherry Quarter reuse impacts.
Fort Monroe is a national treasure and needs to be preserved as a national park for the current and future generations. Anyone who saw the recent Ken Burns TV special series can appreciate the value in keeping as much of these treasures as we can.

Michael McClure
-----Original Message-----
From: Gwyn Williams [mailto:gwynp@verizon.net]
Sent: Monday, October 26, 2009 8:19 PM
To: monr post nepapublic
Subject: Re:Support Fort Monroe National Park

To whom it may concern:
For your information, I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that :
(1) It includes and fully evaluates the option for an **innovative national park unit**, as previously called for by the public.
(2) It properly assesses and classifies Wherry Quarter baseline conditions.
(3) It **properly evaluates Wherry Quarter reuse impacts**.

Gwyn Williams
Yorktown VA 23693
-----Original Message-----
From: Russ Grimm [mailto:grimm_y2@yahoo.com]
Sent: Monday, October 26, 2009 8:23 PM
To: monr post nepapublic
Cc: Corneliussen@Verizon.net; Jeff Grimm; Grimm, David K Mr CIV USA DUSA TEO
Subject: I support the National Park Option for Fort Monroe
Sirs,
Subject: Fort Monroe Draft Environmental Impact Statement (DEIS)
As an army brat who twice lived on Fort Monroe, whose youngest brother was born on it, whose family grew up near it, whose mother's ashes are scattered on it's wind swept beaches, and an Army retiree again living in Hampton, I wholeheartedly support the National Park Option and request that a full and fair evaluation be given the option for an **innovative national park unit,** as previously called for by the public.
As concerns the "Wherry Quarter" I also request that you properly assess and classify its baseline conditions and reuse impacts.

From its beginnings as Fort Alegrnoune (1609) thru Fort George to Fort Monroe; as the Guardian of the Chesapeake Bay and Freedom's Fortress for " contrabands" - Old Point Comfort - and all its storied past cannot be lost to future generations.
The National Park Option is the only one that pays true honor and respect to our nation's compelling and diverse heritage, as well as all who sought, built, and defended it for 400 years.

Sincerely,

Russell A Grimm MAJ (ret)
Hampton, VA

-----Original Message-----
From: butlers.va@juno.com [mailto:butlers.va@juno.com]
Sent: Monday, October 26, 2009 8:36 PM
To: monr post nepapublic
Subject: Comment on DEIS for Fort Monroe

In my view, the DEIS absolutely must consider the national park option, especially the idea of a self-sustaining national park along the lines of the Presidio. The citizens of the region have thrown their support behind this idea in a variety of ways: responses to newspaper polls (80% or more favoring a national park), public participation in planning sessions, hundreds of pro-NPS comments to the Section 106 process, and over 2000 signatures on a Hampton petition calling for an exploration of the national park option.
The Army should also revise the DEIS classification of the Wherry Quarter as a developed area. The structures there have no historical value and are probably viewed by the FM-FADA as temporary. The Wherry Quarter would much better serve a civilian Fort Monroe, a Fort Monroe national park unit, and Virginia tourism as a green space from which to view the north side of the fortress.
And as a green space, the Wherry Quarter would also much better serve the ecology of the Chesapeake Bay.
The Army, like Virginia, needs to keep in mind the public's right to the historical richness and recreational resources of Old Point Comfort, all of which is a National Historic Landmark District.
Thank you,
Scott Butler,
Treasurer, Citizens for a Fort Monroe National Park
Newport News, VA 23606
-----Original Message-----
From: genetb@mymailstation.com [mailto:genetb@mymailstation.com]
Sent: Tuesday, October 27, 2009 5:41 AM
To: monr post nepapublic
Cc: Trapp & Associates
Subject: save fort monroe

To Whom It May Concern,
Please be advised that I, Norman E. Elliott, born (1953) and raised in Hampton, Virginia, enjoyed my first 18 years visiting the historical sites on the base of Fort Monroe.
Although I moved from Hampton 37 years ago, my revisits took me, my nephews, nieces, great nephews and nieces along with family members and friends, back to Fort Monroe to bask in the glory of history! Also, it was a way to remember the

days when my parents took me and my siblings, to Fort Monroe and it was our fantastic escapade to another world from our home! Still to this day, I remember our moments visiting Fort Monroe!
In closing, I hope my letter will be used to keep 'FORT MONROE' as is! It doesn't need to be in the hands of a developer or construction company to mess up, mop up or trash my history and the history of every person who will visit! Let's work to keep Fort Monroe as it was! It doesn't need a shining star to make a living! It has a life of its own! No one should restart history! Fort Monroe has its own, HISTORY!
Sincerely,
Norman Eugene Elliott
-----Original Message-----
From: Peter McHugh [mailto:biappete@yahoo.com]
Sent: Tuesday, October 27, 2009 8:28 AM
To: monr post nepapublic
Cc: Corneliussen@Verizon.net
Subject: Ft Monroe DEIS

This message supports the efforts of Citizens for a Fort Monroe National Park (CFMNP.org <blockedhttp://CFMNP.org>) to rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.
Seldom is so opportune an initiative available to accurately assess the values and impacts of a property use and transfer, and to assure that the best data is available to make the right decisions to preserve environmentally and historically important parts of Virginia and America for future generations. This opportunity will come only once...and will have long and permanent impact. Compared to many other National Parks, Ft Monroe and the surrounding environment has far greater environmental and historical significance....the DEIS must take these broader values into consideration.
As a retired Army Officer and life long Virginia resident, a current Hampton resident, I aggressively support reworking the DEIS for the purposes above, as well as the eventual addition of Ft Monroe and the Wherry Quarter as parts of America's National Park system.

Peter McHugh
Hampton, VA 23669
-----Original Message-----
From: DONNA GILCHRIST [mailto:dmagilchrist@verizon.net]
Sent: Tuesday, October 27, 2009 10:29 AM
To: monr post nepapublic
Subject: Citizens for a Fort Monroe National Park

To Whome It May Concern,
I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

Donna A. Gilchrist
Hampton, VA 23661
-----Original Message-----
From: wrhines@cox.net [mailto:wrhines@cox.net]
Sent: Tuesday, October 27, 2009 11:15 AM
To: monr post nepapublic
Cc: Cornellussen@Verrison.net
Subject: Fort Monroe National Park

Dear Fort Monroe Army Post:
I agree with Citizens for a Fort Monroe National Park. The Army should rework the Fort Monroe Draft Environmental Impact Statement so that it includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public, properly assess and classify **Wherry Quarter baseline conditions**, and properly evaluate Wherry Quarter reuse impacts.
Thank you,
Wendell Hines
Hampton, Virginia 23661

-----Original Message-----
From: Matthew Bickley [mailto:mhbickley@hotmail.com]
Sent: Tuesday, October 27, 2009 10:39 AM
To: monr post nepapublic
Subject: Fort Monroe

Dear Madam/Sir,
The United States Army has served as the steward of Fort Monroe for many decades, and has performed admirably in that role. As responsibility for maintaining this land passes to other hands, I hope that you will consider making recommendations that ensure responsible, long-sighted stewardship for the future. In my opinion this would include a significant role for the National Park Service, and minimal division of the land into private developmental areas. While following the EIS process, please thoroughly investigate all alternatives, including National Park Service involvement in a Fort Monroe National Park.

Thank you for your consideration,
Matthew Bickley
-----Original Message-----
From: Nelda Snyder [mailto:nsnyder03@gmail.com]
Sent: Tuesday, October 27, 2009 11:24 AM
To: monr post nepapublic
Subject: Fort Monroe
We agree with Citizens for a Fort Monroe National Park (CFMNP.org) in their advocacy of a dynamic, vital, multifaceted, self-sustaining, revenue-generating, pays-its-own-way, innovatively structured Grand Public Place at Old Point Comfort, not just a mere "park" separated off at the north end. And we recognize what Virginia's leaders are increasingly recognizing: that former Colonial National Historical Park superintendent Alec Gould, a lifelong Virginian, is right when he explains why federal involvement and a national park unit are financially imperative.
We agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an

innovative national park unit, as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.
We have lived at Fort Monroe during active duty service and feel strongly that this historic and beautiful area must be preserved as only a Nation Park can preserve.
Very Respectfully Yours,
Colonel (Ret) and Mrs. Harold B. Snyder, Jr.
Henrico, VA 23231
-----Original Message-----
From: Gay, Toni LCDR [mailto:Toni.Gay@uscg.mil]
Sent: Tuesday, October 27, 2009 11:20 AM
To: monr post nepapublic
Subject: Make Fort Monroe a National Park!

To Whom it May Concern:

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

Thank you.
Toni Gay, A Concerned Citizen

-----Original Message-----
From: Ray & Maggie [mailto:hollva303@yahoo.com]
Sent: Tuesday, October 27, 2009 1:15 PM
To: monr post nepapublic
Cc: Corneliussen@Verizon.net
Subject: Fort Monroe Draft Environmental Impact Statement (DEIS)

Sirs:
This message is submitted to strongly support the position of the Citizens for a Fort Monroe National Park (CFMNP) regarding the DEIS.
Primarily - the CFMNP position calls for a rework of the document to include broadening the scope by fully evaluating the the preferred option for an innovatively developed national park unit as a key element in the reuse of Fort Monroe. This approach has been called for by the public previously and deserves full consideration in current and future study of the environmental impact problem.
In addition - the CFMNP recommends that the DEIS:
1. Properly assesses and classifies the **Wherry Quarter baseline conditions**.
2. Properly evaluates Wherry housing reuse impacts.
Thank you for the opportunity to offer a voice in this very important matter - the future of Fort Monroe is of great interest to me as it is to many who have been associated withit over many years.

LTC Ray Holleran, USA (Ret)
Hampton,VA 23669-1505

-----Original Message-----
From: Johnny Finch [mailto:johnny_finch@yahoo.com]
Sent: Tuesday, October 27, 2009 1:17 PM
To: monr post nepapublic
Subject: DEIS Comments

We agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

Johnny Finch, President
Virginia Association for Parks
-----Original Message-----
From: D Shannon [mailto:dsworking@yahoo.com]
Sent: Tuesday, October 27, 2009 2:17 PM
To: monr post nepapublic
Subject: In Support of Saving Fort Monroe

Dear Sirs:

I am just a regular citizen, a tax-paying registered voter, and I felt I had to write in with my 2-cents worth on Fort Monroe. I think the national park option is a wonderful idea and should be the future of Fort Monroe for the benefit of local, national, and even worldwide visitors. Allowing Fort Monroe to be protected as a place of natural beauty and history would be good for preserving the area's true history and for attracting money to local businesses and thereby tax revenues to local government without the type of development that will price out so many local citizens who do not have much disposable income but may be descendants of contraband slaves (an integral part of Fort Monroe's history) and/or in any case should not be priced out of being able to share Fort Monroe's history with their children and grandchildren.
Therefore, I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS to that it includes and thoroughly evaluates the innovative national park option (as the public has already called for), and also that the Army properly evaluates Wherry Quarter reuse impacts.
Sincerely,
Donna Shannon
-----Original Message-----
From: dclarke12@juno.com [mailto:dclarke12@juno.com]
Sent: Tuesday, October 27, 2009 2:20 PM
To: monr post nepapublic
Cc: Corneliussen@Verizon.net
Subject: EIS for Fort Monroe

This is a message in support of citizens' groups calling for modifications to the Draft Environmental Impact Statement regarding Fort Monroe. I agree that the Statement should include discussion of an option for a national park associated with the site. This is because Fortress Monroe has fully as much national historical significance as Civil War battlefields that are accorded national or state park protection. Moreover, the Statement should discuss the environmental

impact of any proposed reuse of the portion of the site known as the Wherry Quarter.

Sincerely,

Donald Clarke
Arlington, VA 22202
-----Original Message-----
From: A Chapman [mailto:achapman19@cox.net]
Sent: Tuesday, October 27, 2009 8:50 PM
To: monr post nepapublic
Subject: Fort Monroe and a National Park

In preparation of the Environmental Impact Statement the Army failed to follow the most important tenet in any decision-making process--the taking into account of all alternative solutions. In this case, the pros and cons of establishing a National Park at the former Army base were not examined or investigated from either a practical or a financial point of view. No reasonable or suitable decision as to the future of Fort Monroe can be forthcoming without consideration of all possible solutions.
-----Original Message-----
From: Worms Thomas [mailto:kkdonut@sbcglobal.net]
Sent: Tuesday, October 27, 2009 9:32 PM
To: monr post nepapublic
Subject: Ft. Monroe Draft Environmental statement

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

Thank you

Thomas Worms
Chicago, IL
-----Original Message-----
From: Adrienna Davis [mailto:drie1466@yahoo.com]
Sent: Tuesday, October 27, 2009 5:48 PM
To: monr post nepapublic
Subject: Please Save Fort Monroe

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

Adrienna Mason Davis
-----Original Message-----
From: Ginny Kay Cox [mailto:ginnykay@verizon.net]
Sent: Tuesday, October 27, 2009 5:59 PM

To: monr post nepapublic
Subject: Ft. Monroe

Dear Sirs:
I am deeply committed to the preservation of Fort Monroe for many reasons. Perhaps it is because my father in law was Regional Director of the National Park Service (he would have loved Ken Burns!) and I understand former Colonial National Historical Park Superintendant Alec Gould when he explains the financial imperative of federal involvement and a national park unit.
In any case, I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it:
1. Includes and fully evaluates the option for an **innovative National Park Unit** as previously called for by the public 2. Properly assesses and classifies **Wherry Quarter baseline conditions** 3. **Properly evaluates Wherry Quarter reuse impacts.**
With hope and confidence that we can together create a Grand Public Place at Old Point Comfort,
Sincerely,
Ginny Kay Cox
Poquoson VA 23662
-----Original Message-----
From: BFOGLE@aol.com [mailto:BFOGLE@aol.com]
Sent: Tuesday, October 27, 2009 10:07 PM
To: monr post nepapublic
Subject: Save Fort Monroe

Gentlemen -
I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it:
*Includes and fully evaluates the option for an innovative national park unit, as previously called for by the public
*Properly assesses and classifies **Wherry Quarter baseline conditions**, and
***Properly evaluates Wherry Quarter reuse impacts**
Thank you for your consideration.
Bob Fogle
-----Original Message-----
From: Bill Blackwelder [mailto:wblackwelder@verizon.net]
Sent: Tuesday, October 27, 2009 10:26 PM
To: monr post nepapublic
Subject: Fort Monroe Draft Environmental Impact Statement
Dear Sir,
Concerning the Fort Monroe Draft Environmental Impact Statement (DEIS), as advocated by Citizens for a Fort Monroe National Park, I urge the Army to rework the DEIS so that it includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public, properly assesses and classifies **Wherry Quarter baseline conditions**, and **properly evaluates Wherry Quarter reuse impacts**.
Thank you for your consideration of this matter.
Sincerely yours,
William C. Blackwelder
CAPT, USPHS (Ret)
Bethesda, MD 20817

-----Original Message-----
From: rjcone1 [mailto:rjcone1@att.net]
Sent: Wednesday, October 28, 2009 2:32 AM
To: monr post nepapublic
Subject: Fort Monroe Draft Environmental Impact Statement

Gentlemen and Ladies:
Concerning the Draft Environmental Impact Statement for Fort Monroe, I strongly support the position that the draft EIS should be reworked to :
Include and fully evaluate the option, called for by the public, for an **innovative national park unit,** Properly assess and classify the **Wherry Quarter baseline conditions**, and Also, fully evaluate the Wherry Quarter reuse impacts.
Thank you for your consideration.
Read Cone

-----Original Message-----
From: CGDEDOC@aol.com [mailto:CGDEDOC@aol.com]
Sent: Wednesday, October 28, 2009 7:54 AM
To: monr post nepapublic
Subject: National Park at Fort Monroe
I am in agreement with the Citizens for a Fort Monroe National Park. I believe that the DEIS should be reworked by the Army so that it:
(1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**
Thank you for your attention to this matter.
Christopher Giles

-----Original Message-----
From: Doug Johnson [mailto:dj@columbiacountymag.com]
Sent: Wednesday, October 28, 2009 8:14 AM
To: monr post nepapublic
Subject: Fort Monroe

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it
(1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**

-----Original Message-----
From: Bill McHugh [mailto:wmchugh@williamrmchugh.com]
Sent: Wednesday, October 28, 2009 8:28 AM
To: monr post nepapublic
Subject: Fort Monroe

Dear Sirs,
As one who is very familiar with the issues surrounding the conversion of Fort Monroe from military to civilian use, it is my firm conviction that the Army's Draft Environmental Impact Statement should be revised so that it fully considers

the option of turning the site into a National Park along the lines called for by various citizens groups. In addition, the DEIS should include an evaluation of the baseline condition of the Wherry Quarter and the potential impact of its reuse.
Thank you for giving this your consideration.

William R. McHugh III
Bush, LA 70431-2512
-----Original Message-----
From: Jim Leach [mailto:jleach@isgins.com]
Sent: Wednesday, October 28, 2009 8:31 AM
To: monr post nepapublic
Subject: Ft Monroe help

agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an innovative national park unit, as previously called for by the public(2) properly assesses and classifies **Wherry Quarter baseline conditions,**and(3) **properly evaluates Wherry Quarter reuse impacts.**

-----Original Message-----
From: Rob & Dian James [mailto:rd.james@comcast.net]
Sent: Wednesday, October 28, 2009 9:14 AM
To: monr post nepapublic
Subject: Save Fort Monroe

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it
(1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public(2) properly assesses and classifies **Wherry Quarter baseline conditions**, and(3) **properly evaluates Wherry Quarter reuse impacts.**
We must save this national treasure.
Robert L. James

-----Original Message-----
From: vetbird@aol.com [mailto:vetbird@aol.com]
Sent: Wednesday, October 28, 2009 8:02 AM
To: monr post nepapublic
Subject: Ft Monroe

Sirs:

I agree with the Citizens for a Fort Monroe National Park.

the Army should rework the DEIS so that it
(1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**
J. Comfort MD
Eustis, FL

-----Original Message-----
From: Reed Jim [mailto:jsreed@mac.com]
Sent: Wednesday, October 28, 2009 7:27 PM
To: monr post nepapublic
Subject: Fort Monroe

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it
(1) includes and fully evaluates the option for an innovative national park unit, as previously called for by the public (2) properly assesses and classifies Wherry Quarter baseline conditions, and (3) **properly evaluates Wherry Quarter reuse impacts**.

-----Original Message-----
From: Harold Snyder [mailto:hal.snyder.dds@gmail.com]
Sent: Wednesday, October 28, 2009 5:57 PM
To: monr post nepapublic
Cc: Mom and Dad
Subject: Save Fort Monroe
To Whom it may Concern,

I am retired Army and spent time growing up at Fort Monroe when my father was assigned there. Please rethink the DEIS. I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it:
(1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

Thank-you for consideration of this matter,
Harold B. Snyder, USA, COL (Ret)

-----Original Message-----
From: Lyn & David Douglas [mailto:lgouglas@cox.net]
Sent: Wednesday, October 28, 2009 9:26 PM
To: monr post nepapublic
Subject: Fort Monroe Draft Environmental Impact Statement

The purpose of this email is to voice my agreement with Citizens for a Fort Monroe National Park that the Army should rework the Draft Environmental Impact Statement (DEIS) for Fort Monroe so that it includes, and fully and fairly evaluates, the option for a National Park. This is the option that has been called for by the general public! In addition, the DEIS should properly assess and classify **Wherry Quarter baseline conditions**, and properly evaluate Wherry Quarter reuse impacts.

Thank you,
Lyn M. Douglas
-----Original Message-----
From: Bonnie Marshall [mailto:bonniemarshall@copper.net]
Sent: Wednesday, October 28, 2009 9:32 PM

To: monr post nepapublic
Subject: Fort Monroe

I whole-heartedly agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**
Thanking you in this regard,
BONNIE A. MARSHALL

-----Original Message-----
From: Jackie Crowe [mailto:jackiecrowe123@yahoo.com]
Sent: Wednesday, October 28, 2009 9:59 PM
To: monr post nepapublic
Subject: Citizens for a Fort Monroe National Park

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it includes and fully evaluates the option for an innovative national parkk unit, as previously called for by the public, that it properly assesses and classifies **Wherry Quarter baseline conditions** and the it **properly evaluates Wherry Quarter reuse impacts**. Thanks for taking my opinion into consideration.
Jacqueline K Crowe
Hampton VA 23663

-----Original Message-----
From: cecile trevathan [mailto:bebythebay@gmail.com]
Sent: Wednesday, October 28, 2009 10:31 PM
To: monr post nepapublic
Subject: Ft Monroe DEIS

To Whom It May Concern:
I attended the October 6 public meeting at the Hampton Roads Convention Center regarding the U.S. Army's DEIS. Please know that I believe the DEIS should be re-evaluated to consider the option for a National Park Unit. In addition, I feel that the DEIS should review the baseline conditions and reuse impact of the Wherry Quarter on Ft. Monroe.

Thank You,
Cecile Trevathan
Hampton, Virginia 23664

-----Original Message-----
From: Carl Lundquist [mailto:cdlundquist@gmail.com]
Sent: Wednesday, October 28, 2009 10:39 PM
To: monr post nepapublic
Subject: Ft Monroe National Park
Importance: High

I would like to state my support for a Ft. Monroe National Park and that emphasizes its military roles in the Civil War and the later Coast Artillery

emplacements. The use of the Presidio of San Francisco in the Golden Gate NRA tho not perfect supplies a good, tho not perfect, model. I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.
Tho I am a resident of California now, as a child my family was stationed at the Fort with quarters in the Fortress one door from the Main Gate on Ruckman road in quarters dating from the 1870s. I would hope my grandchildren could visit there one day.

Carl D. Lundquist
Culver City, CA 90232
-----Original Message-----
From: Cecelia Kelly [mailto:c_kelly@cox.net]
Sent: Wednesday, October 28, 2009 10:50 PM
To: monr post nepapublic
Subject: Save Ft. Monroe •••
As a citizen of Hampton, I definitely AGREE with Citizens for a Fort Monroe National Park that the Army should rework the Draft Environmental Impact Statement so that it will include and fully evaluate the option for an innovative national park unit as was previously called for by the public.
It will also need to properly assess and classify the **Wherry Quarter baseline conditions** as well as properly evaluate Wherry Quarter reuse impacts.
As a Hampton citizen, I feel it is my duty to make sure that the Fort Monroe property does NOT go to the city of Hampton, but that it is nationally recognized and respected and made into a dynamic, self-sustaining national park that will add to the historic enrichment, as well as enjoyment, of everyone in the country.
Please save such an important treasure as Fort Monroe!

-----Original Message-----
From: dalucrot13@netzero.net [mailto:dalucrot13@netzero.net]
Sent: Wednesday, October 28, 2009 11:00 PM
To: monr post nepapublic
Cc: corneliussen@verizon.net; canepasa@cox.net
Subject: The future of Fort Monroe

To whom this may concern:
Understanding what Point Comfort/Fort Algernon/Fort Monroe has been to the growth of this nation, it is practically inconceivable that the federal government would wish to terminate what has been a four-century history of military occupation.
The closure of Fort Monroe is an affront to the US Army, and demonstrates complete lack of regard for our national heritage. This action is as reprehensible as all the pork-barreling and pandering to lobbyists that occur in Washington, DC.; and the law should be repealed.
Having observed, over the past three decades, the barrage of expensive, failed development projects fostered and/or engendered by the City of Hampton's government, I find it equally inconceivable that they should be entrusted with any decisions for the future of Fort Monroe. The Fort Monroe FADA and Hampton City Council are stacked too heavily with developers and developer-sympathizers to reach any un-biased conclusions on the ultimate disposal of Fort Monroe

Stewardship of these sacred lands and edifices must be entrusted to a worthy body, whose interests lie above the temporal economic land-raping that is so dismally prevalent. The historical features and environmental aspects of Fort Monroe are far more valuable than any imagined need for further commercial or residential development.
I agree with Citizens for a Fort Monroe National Park that the US Army should rewrite the Draft Environmental Impact Statement so that it includes (and fully evaluates) the option for an **innovative national park unit,** as previously called for by the public. It should properly assesses and classify **Wherry Quarter baseline conditions**; and thoroughly evaluate Wherry Quarter reuse impacts.
An ideal situation, if the US Army must leave, would be a joint stewardship comprising three federal bodies: Interior, Defense, and Homeland Security. (1) Fort Monroe has always been a great attraction to learn from living history. To the average citizen, a national park is the most obvious and essential option. This would be a responsibility beyond the capability of the Commonwealth of Virginia. (2) For the sake of historic continuity, the US Army should maintain some foothold (if only ceremonial) at Point Comfort; for when they depart, we will have lost something unique in the Western Hemisphere that we will never again see. 400 years of faithful service should neither be abandoned nor neglected. (3) On the lands and in the waters surrounding Hampton Roads Harbour are the nation’s mightiest Air Force, Army and Naval facilities: Langley Air Force Base, Fort Eustis, and Norfolk Naval Base; as well as a World Trade Center and NATO Headquarters in Norfolk; a large Veterans’ Affairs Medical Center and the home of NASA in Hampton; and the World's largest Shipbuilder in Newport News. Hampton Roads is an immense and economically vital harbour. This region is the great center of U.S. defense preparedness and technological advancement. In these cautious times of terrorist activity, Hampton Roads is also the nation’s strongest source of action. Situated at the mouth of the harbour, Fort Monroe should be an intelligence headquarters for anti-terrorism deterrence and response.
Only my thoughts, though good ones, I believe. Thank you for your consideration.

D. Luis Otero
-----Original Message-----
From: bill_kelly@cox.net [mailto:bill_kelly@cox.net]
Sent: Wednesday, October 28, 2009 11:28 PM
To: monr post nepapublic
Subject: Save Ft. Monroe

As a citizen of Hampton, I definitely AGREE with Citizens for a Fort Monroe National Park that the Army should rework the Draft Environmental Impact Statement so that it will include and fully evaluate the option for an innovative national park unit as was previously called for by the public.
It will also need to properly assess and classify the Wherry Quarter baseline conditions as well as properly evaluate Wherry Quarter reuse impacts.
As a Hampton citizen, I feel it is my duty to make sure that the Fort Monroe property does NOT go to the city of Hampton, but that it is nationally recognized and respected and made into a dynamic, self-sustaining national park that will add to the historic enrichment, as well as enjoyment, of everyone in the country.
Please save this important historical treasure for our grand children!
V/r William Kelly

-----Original Message-----
From: wavannort@earthlink.net [mailto:wavannort@earthlink.net]
Sent: Wednesday, October 28, 2009 10:13 AM
To: monr post nepapublic
Subject: Fort Monroe Draft Envirnmental Impact Statement (DEIS)

Dear Sirs/Mesdames,
I am writing as concerned citizen about the Army's DEIS relating to Fort Monroe. I am a Florida resident with a strong interest in American History and National Parks. Fort Monroe is a very unique piece of property in our country's history. In addition, it has the potential to become valuable national park to serve Americans long into the future.
I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it:
(1) includes and fully evaluates the option for an innovative national park unit, as previously called for by the public;(2) properly assesses and classifies **Wherry Quarter baseline conditions**; and(3) **properly evaluates Wherry Quarter reuse impacts.**

Thank you for your consideration of this matter.
William A. Van Nortwick
Tallahassee, FL 32312-2447
-----Original Message-----
From: vetbird@aol.com [mailto:vetbird@aol.com]
Sent: Wednesday, October 28, 2009 8:02 AM
To: monr post nepapublic
Subject: Ft Monroe

Sirs:
I agree with the Citizens for a Fort Monroe National Park. the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**

J. Comfort MD
Eustis, FL
-----Original Message-----
From: Annette Tollett [mailto:ahtollett@yahoo.com]
Sent: Wednesday, October 28, 2009 10:36 AM
To: monr post nepapublic
Subject: Frt Monroe National Park

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**

-----Original Message-----
From: enmpowell@aol.com [mailto:enmpowell@aol.com]
Sent: Wednesday, October 28, 2009 11:22 AM

To: monr post nepapublic
Cc: lisabellepowell@yahoo.com
Subject: Fort Monroe DEIS

To Whom it Concerns:
I agree with the citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it:
1. includes and fully evaluates the option for an innovative national park unit as called for by the public,2. properly asses and classifies Wherry Quarterbaseline conditions, and 3. **properly evaluates Wherry Quarter reuse impacts.**
Thank you for your time,
Lisa B. Powell
Williamsburg, Virginia

-----Original Message-----
From: Carter Ficklen [mailto:cficklen@yahoo.com]
Sent: Wednesday, October 28, 2009 12:52 PM
To: monr post nepapublic
Subject: Comments of Draft EIS for Ft. Monroe

Hello U.S. Army staff,
This email is to provide my comments on the Ft. Monroe Draft Environmental Impact Statement (EIS). I encourage full and proper evaluation of the Ft. Monroe national park option as a self-sustaining treasure for the public to use and enjoy.
I request that appropriate national park option consideration be given to the "Wherry Quarter" area and its utilization. The national park option needs to be included and fully evaluated. Also the "Wherry Quarter" baseline conditions should be fully assessed. In closing, I also encourage a thorough and proper evaluation of the "Wherry Quarter" reuse options.

I greatly appreciate this opportunity to provide my comments on the Draft EIS.
Sincerely,
Carter Ficklen, Jr.
Yorktown, VA 23693

-----Original Message-----
From: Frank Born [mailto:fborn@sbcglobal.net]
Sent: Wednesday, October 28, 2009 1:18 PM
To: monr post nepapublic
Subject: Ft. Monroe

Dear Sirs,
As a concerned citizen for the prervation of Ft. Monroe, I urge you to (1) fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assess and classify **Wherry Quarter baseline conditions**, and (3) properly evaluate Wherry Quarter reuse impacts.
Sincerely,
Frank Born

-----Original Message-----
From: William M. Grigg [mailto:griggbill@verizon.net]
Sent: Wednesday, October 28, 2009 2:01 PM
To: monr post nepapublic
Subject:

I would like to encourage a dynamic, self-sustaining, revenue-generating Grand Public Place at Old Point Comfort, not just a mere "park" separated off at the north end. Like many others, I recognize what Virginia's leaders are increasingly recognizing: that former Colonial National Historical Park superintendent Alec Gould, a lifelong Virginian, is right when he explains why federal involvement and a national park unit are financially imperative.
I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public, (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts.**
Thank you for listening!

-----Original Message-----
From: Mark Heaney [mailto:moh90266@yahoo.com]
Sent: Wednesday, October 28, 2009 2:54 PM
To: monr post nepapublic
Subject: Fort Monroe
Dear Sirs: I am writing to advise you that I completely agree with the position taken by Citizens for a Fort Monroe National park urging the Army to rework the Draft Environmental Impact Statement so that it includes and evaluates the option for an innovative national park unit; properly assesses and classifies **Wherry Quarter baseline conditions**; and **properly evaluates Wherry Quarter reuse impacts.**
Thank you for your attention in this important matter.

-----Original Message-----
From: Peter [mailto:peterfp@gmail.com]
Sent: Wednesday, October 28, 2009 3:02 PM
To: monr post nepapublic
Subject: Fort Monroe - DEIS

Dear Army:
Re:Fort Monroe Draft Environmental Impact Statement
I'd like to request that the DEIS should be reworked in accordance with the suggestion of the Citizens for a Fort Monroe National Park so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions** (3) **properly evaluates Wherry Quarter reuse impacts.**
Fort Monroe is a place of historic, geographical, natural and ,to me, personal value which is immeasurable. Your task is daunting in its importance and I am sure that the requirements that define success for your efforts are many and varied. I wish you all the very best and thank you for your sincere efforts to produce the result which best matches the qualifications of your project.
Yours truly,
Peter Poage
Harrisonburg, VA 22802

-----Original Message-----
From: Steve Flora [mailto:floras@netspeed.com.au]
Sent: Wednesday, October 28, 2009 3:50 PM
To: monr post nepapublic
Subject: The Future of Fort Monroe

Hello,
Just an email comment as I nod in agreement with the stand taken by the group Citizens for a Fort Monroe National Park. The US Army's plan called the DEIS should be reworded to include and evaluate the national park unit option, do a proper assessment and classification of the Wherry Quarter baseline conditions and though last, not least, properly evaluate the impacts of the various Wherry Quarter reuse routes.
Though I no longer live full time in the US, when I was a member of the USCG stationed just to the south of Portsmouth, I often visited Fort Monroe or passed by it. The history that it represents and contains for the Civil War, the ARMY, the country as a whole is precious and something that the US has too little of. Real, tangible, history that ties us physically to Lincoln, Lee, Davis and countless others. It should be set on a path for the future that will help guarrantee that it is in place for the people of the next 100, 200, 300 years ...

Regards,
Steve Flora
Canberra, Australia.
-----Original Message-----
From: jennifer adderley [mailto:jenphi2@yahoo.com]
Sent: Thursday, October 29, 2009 6:33 AM
To: monr post nepapublic
Cc: Gerri Hollins
Subject: FM DEIS

I would like for the Army to include a report in their DEIS, informing the public, on the progress made for Identifying the Slaves' burial grounds at Fort Monroe. It has been two years since the request was made as a part of the Impact statement and there has been no mention of it to date. With slightly under two years left before departure it is imperative that the Army provides the resources necessary for an archeology study.
I also agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.
sincerely

Philip Adderley
The Contraband Historical Society
Citizens For Fort Monroe National Park
-----Original Message-----
From: Al Verdini [mailto:gio.acco@verizon.net]
Sent: Wednesday, October 28, 2009 11:30 PM
To: monr post nepapublic
Subject: Fwd: Help save Ft Monroe (reminder)

Oct 29, 2009 03:12:35 AM, gio.acco@verizon.net wrote:
With All Due Respect Please,
And gratitude for those in the Military that fight and die for the Freedoms that we all enjoy and appreciate (especially the "we" that are civillian, and do NOT risk our lives).
Ft. Monroe is not as famous as Ft. Sumpter, but it has a valuable place in our History, and as a Monument to those that died in the growth and development of our Nation and people into a unified society.
With respect to your time, I will end this with the request that al consideration be given to the preservation of Ft. Monroe as a Historical Park and a little island of respect. The urban sprawl that grows daily will continue to grow around it, and our people will have enough room to thrive and make our own history.
Thank you for your time and consideration.

Respectfully,
Al J. Verdini
-----Original Message-----
From: Mark Magnussen [mailto:mark_magnussen@hotmail.com]
Sent: Thursday, October 29, 2009 7:03 AM
To: monr post nepapublic
Subject: Environmental Impact Statement

Sir:
I agree with the Citizens for a Fort Monroe Park and ask that the DEIS be revised to consider the national park option and the reuse of the Wherry housing area.
Mark Magnussen
-----Original Message-----
From: Julie Humes [mailto:julie@humes.us]
Sent: Thursday, October 29, 2009 8:07 AM
To: monr post nepapublic
Cc: Julie Humes
Subject: enviromental impact statement, & I am in favor of Fort Monroe National Park
I am interested in the synopsis of the environmental impact statement concerning Fort Monroe.
Of course as a lifelong citizen of Hampton Roads I agree with Citizens for a Fort Monroe National Park.
Thank you for your attention with this matter.
Julie Landman-Humes
Yorktown, VA

-----Original Message-----
From: Powell, Michael V. [mailto:mpowell@lockelord.com]
Sent: Thursday, October 29, 2009 8:42 AM
To: monr post nepapublic
Cc: Treni, Pamela R.
Subject: Fort Monroe, Virginia

Dear Sir or Madam:
I was stationed at Fort Monroe from 1970 to 1972 as a lieutenant in the Military Police Corps. I was fascinated by the American history that surrounded me at Fort

Monroe. To borrow a phrase from another author, the ground at Fort Monroe literally vibrates with the importance of history. I strongly support making Fort Monroe a National Park. I cannot see another option that properly recognizes what happened there before, during and after the Civil War. I agree with the Citizens for a Fort Monroe National Park that the Army should rework the Draft Environmental Impact Statement to include and fully evaluate the option for a national part. My family lived in Wherry Housing. You should properly assess and classify Wherry Housing basline conditions and properly evaluate Wherry Quarter reuse impacts.
Thank you.

Michael V. Powell
Dallas, Texas 75201-6776
-----Original Message-----
From: Rex Walz [mailto:rex.walz@airgas.com]
Sent: Thursday, October 29, 2009 8:06 AM
To: monr post nepapublic
Cc: cecile trevathan
Subject: Fort Monroe as a National Park

To Whom It May Concern:

This communication is to inform you that I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.
Rex Walz
Molino, FL 32577
-----Original Message-----
From: Evelyn Akers [mailto:e.akers0@gmail.com]
Sent: Thursday, October 29, 2009 7:05 AM
To: monr post nepapublic
Subject: DEIS re: Fort Monroe, Virginia

It seems that the current DEIS does not include the reuse of the entire Fort Monroe property. As a citizen of the region and a former resident of the historic Army post, I urge you to add the Wherry Quarter (the substantial piece of land adjacent to the seawall between the old Fort Monroe Officer's Open Mess and the radar shack) to the environmental impact statement before considering the document complete. To exclude any of the acreage within the boundaries of Fort Monroe's control from the impact statement is, in my opinion, a deliberate sin of omission.
This particular stretch of land would be an outstanding national park. Removing the existing housing and leaving the seawall and the inactive bunkers would provide an outstanding place for recreation, and will retain access to the beautiful beachfront for all citizens. The National Park Service is the ideal agency to award the budget and responsibility to maintain this land and its assets for the citizens of the United States.
I am strongly opposed to the suggestions of local city managers and real estate developers that this precious land resource be turned into a commercially managed, overdeveloped part of Hampton. We all, as citizens of the US, have a

short-lived opportunity to use the Fort Monroe property as a ecologically green park for everyone. Please consider inclusion of the Wherry Quarter land in your environmental statement. Include comments about how removing the bunkers or changing the seawall will affect the beach, the birds, and the native (albeit sparse) grass on the post.

Thank you,
Evelyn Akers
Seaford, VA 23696
-----Original Message-----
From: Lee Rich [mailto:lee.rich@mac.com]
Sent: Thursday, October 29, 2009 8:20 AM
To: monr post nepapublic
Subject: DEIS/Ft. Monroe

I agree with the position taken by the Citizens for Fort Monroe National Park: rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) properly evaluates Wherry Quarter reuse impacts. Thank you, Lee Riggins Rich

-----Original Message-----
From: Julie Murphy [mailto:julie.circlec@cox.net]
Sent: Thursday, October 29, 2009 8:44 AM
To: monr post nepapublic
Subject: Please consider this re: Fort Monroe's future

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it:

(1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public
(2) properly assesses and classifies **Wherry Quarter baseline conditions**, and
(3) **properly evaluates Wherry Quarter reuse impacts**.
Thank you for your consideration.

Julianne Murphy
Hampton, Virginia 23663
-----Original Message-----
From: Neva Adams [mailto:searching4dna@gmail.com]
Sent: Thursday, October 29, 2009 8:57 AM
To: monr post nepapublic
Subject: Ft. Monroe

To Whom It May Concern,
Our whole family would really like to see Fort Monroe become a National Park. We enjoy going to many of the National Parks on the East coast but it would be wonderful to have one nearby, especially one that contains so much history! Ft. Monroe is like no other park in the US.
I normally like to use my own words, but I will borrow words from from the Citizens for Ft. Monroe Nat. Park. It would be so helpful if the Army would rework the DEIS so that it (1) includes and fully evaluates the option for an

innovative national park unit, as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.
Details like this are beyond me, but we strongly hope that the Ft. Monroe will become a Nat. Park for all to use and to learn from.
Thank you so much! I am including the names of all my adult children because we have talked about it and all hope that it becomes a reality. We've missed being able to go there so freely since 9/11.
Don & Neva Adams
Jason & Karen Tutone, Abby, Mia and Ariana Tutone
Rachel Adams
Jon & Adva Adams
David Adams

-----Original Message-----
From: j.bieschke@att.net [mailto:j.bieschke@att.net]
Sent: Thursday, October 29, 2009 8:47 AM
To: monr post nepapublic
Subject: Ft. Monroe

As an Army brat with many fond memories of summer days at Ft. Monroe when my Father was stationed there from 1959 to 1962, I agree with Citizens for a Fort Monroe National Park that the Army
should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies Wherry Quarter baseline
conditions, and (3) **properly evaluates Wherry Quarter reuse impacts**.
Sincerely,
John K. Bieschke
White Post, VA 22663-0061

-----Original Message-----
From: Virginia Gabriele [mailto:vtagabe@widomaker.com]
Sent: Thursday, October 29, 2009 9:24 AM
To: monr post nepapublic
Subject: In support of a national park at Fort Monroe

I wish to state my support for the aims of Citizens for a Fort Monroe National Park, that: The Fort Monroe Draft Environmental Impact Statement should be reworked to include and fully evaluate the option for an **innovative national park unit,** as previously called for by the public; properly assess and classify the Wherry Quarter baseline conditions; and properly evaluate Wherry Quarter re-use impacts.
Fort Monroe is a site of immense historical significance for the entire nation, and must be treated as such.
Thank you,

Anthony A. Gabriele
Yorktown, Virginia
-----Original Message-----
From: DONNA GILCHRIST [mailto:dmagilchrist@verizon.net]
Sent: Thursday, October 29, 2009 9:25 AM

To: monr post nepapublic
Subject: FM DEIS

To Whom It May Concern,

I agree with the Contraband Society and CFMNP, and I would like for the Army to include a report in their DEIS, informing the public, on the progress made for Identifying the Slaves' burial grounds at Fort Monroe. It has been two years since the request was made as a part of the Impact statement and there has been no mention of it to date. With slightly under two years left before departure it is imperative that the Army provides the resources necessary for an archeology study.

I also agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

Thank you,

Donna A. Gilchrist
-----Original Message-----
From: rabsum@juno.com [mailto:rabsum@juno.com]
Sent: Thursday, October 29, 2009 9:59 AM
To: monr post nepapublic
Subject: Fort Monroe

I am writing to ask that the Fort Monroe property be developed as a National Park in accordance with the suggestions of the Citizens for a Fort Monroe National Park. Specifically, the Army should rework the DEIS so that it will call for an innovative National Park that is multifaceted, self-sustaining, revenue generating, and dynamic. I also ask that you include the Wherry Quarter in your plan and properly assess it's baseline conditions and reuse impacts.

Thanks you.

R. T (Rab) Summers
Elizabethton, TN 37644
-----Original Message-----
From: Mike McKenzie [mailto:jcrdist1@airmail.net]
Sent: Thursday, October 29, 2009 10:18 AM
To: monr post nepapublic
Subject: Fort Monroe DEIS

Please register my support for the position taken by the Citizens for a Fort Monroe National Park.
1. The DEIS should consider a full evaluation of the national park option
2.Baseline conditions in Wherry Quarter need to be properly assessed and classified 3. Wherry Quarter reuse impacts need to be evaluated properly

-----Original Message-----
From: Elemess@aol.com [mailto:Elemess@aol.com]
Sent: Thursday, October 29, 2009 10:25 AM
To: monr post nepapublic
Subject: Fort Monroe National Military Park

To Whom It May Concern:
I would hope that in your complete consideration of alternatives for the re-use of Fortress Monroe after its closure by the US Army in 2011, you include an option of turning the property into a National Park for the future enjoyment and education of all the American people.
As a retiree who had the privilege of serving in the "oldest continually fortified facility in the United States", it would be a sorrowful day indeed to see that historic site subdivided into condos and McMansions for the temporary easement of some city's tax rolls.
With a historic past that spans almost as long as the history of English-speaking settlements in North America, "the post at Old Point Comfort" deserves a better break than that.

Thank you.

Leonard M. Schodowski
LTC, Infantry
US Army, Retired
-----Original Message-----
From: J. James Murray [mailto:jjm5a@cms.mail.virginia.edu]
Sent: Thursday, October 29, 2009 10:33 AM
To: monr post nepapublic
Subject: Fort Monroe National Park

Ladies and Gentlemen,

I write to urge the full consideration of Fort Moroe for designation as a National Park. I agree with the Citizens for a Fort Monroe National Park that the Army ought to revise the DEIS to take into account the desires of the local community to have this property saved for public enjoyment. The DEIS should also evaluate the status of the Wherry Quarter.

Thank you for your consideration,
J. J. Murray
Charlottesville, VA 22911
-----Original Message-----
From: Russell Evett [mailto:rdemd@cox.net]
Sent: Thursday, October 29, 2009 10:51 AM
To: monr post nepapublic
Subject: DEIS on Fort Monroe

Dear Sirs:
As a concerned citizen, I am writing in support of the position of Citizens for a Fort Monroe National Park that the Army should rework the DEIS. The improved statement should: (1) include and fully evaluate the option for an **innovative national park unit,** as previously called for by the public;(2) properly assess

and classify **Wherry Quarter baseline conditions**; and (3) properly evaluate Wherry Quarter reuse impacts. Thank you for all of your good efforts in this important arena.

Sincerely,

Russell D. Evett
-----Original Message-----
From: Walter Tucker [mailto:wdtusnr@verizon.net]
Sent: Thursday, October 29, 2009 11:18 AM
To: monr post nepapublic
Subject: Fort Monroe

This message contained an html attachment that has been removed by AKO/DKO in accordance with INFOCON levels 3 and 4.

-----Original Message-----
From: Janet Lilley [mailto:janetlilley@verizon.net]
Sent: Thursday, October 29, 2009 11:36 AM
To: monr post nepapublic
Subject: Future of Ft. Monroe

As a native Virginian who loves and appreciates the history of our Commonwealth, I am writing to voice my concern about the future of Ft. Monroe. I strongly agree with the majority of citizens who feel that Ft. Monroe should be a national park. There is too much history and too much promise there, that would be forever lost if this does not happen.
I feel that the Army should rework the DEIS so that it includes and evaluates the national park option as called for by citizens. I also feel that the Army should properly assess and classify the **Wherry Quarter baseline conditions** and properly evaluate the Wherry Quarter reuse impact.
Thank you for your consideration of these requests.

Janet W. Lilley
Chesapeake, VA 23321
-----Original Message-----
From: D Shannon [mailto:dsworking@yahoo.com]
Sent: Thursday, October 29, 2009 11:26 AM
To: monr post nepapublic
Cc: Gerri Hollins
Subject: FM DEIS

I'm writing to state that I agree wholeheartedly with the comments below, submitted by Mr. Philip Adderly.
Ms. Donna Shannon
Member, Contraband Historical Society

--- On Thu, 10/29/09, jennifer adderley <jenphi2@yahoo.com> wrote:
From: jennifer adderley <jenphi2@yahoo.com>
Subject: FM DEIS
To: Monr.post.nepapublic@us.army.mil
Cc: "Gerri Hollins" <gerrilhollins@verizon.net>

Date: Thursday, October 29, 2009, 6:33 AM

I would like for the Army to include a report in their DEIS, informing the public, on the progress made for Identifying the Slaves' burial grounds at Fort Monroe. It has been two years since the request was made as a part of the Impact statement and there has been no mention of it to date. With slightly under two years left before departure it is imperative that the Army provides the resources necessary for an archeology study.
I also agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.
sincerely

Philip Adderley
The Contraband Historical Society
Citizens For Fort Monroe National Park

-----Original Message-----
From: Sharon Holbrook [mailto:spholbrook@cox.net]
Sent: Thursday, October 29, 2009 12:51 PM
To: monr post nepapublic
Subject: Fort Monroe

As a teacher, I have taken classes on field trips to your beautiful Fort Monroe. Its location lends itself to a National Park - the students were wowed by the views and open spaces throughout the base. As retired military, my husband and I have enjoyed the music presented in the gazebo and the peaceful environs of the area.
I agree with the Citizens for a Fort Monroe National Park and hope this comes to be. I also agree that the Army should rework DEIS to include and evaluate the park option and to assess and classify **Wherry Quarter baseline conditions** and evaluate its reuse impact.
Thank you.
Sharon Holbrook

-----Original Message-----
From: alecgould [mailto:alecgould@cox.net]
Sent: Thursday, October 29, 2009 1:50 PM
To: monr post nepapublic
Subject: Draft Environmental Impact Statement

Dear Sir/Madam - My biggest concern is that the statement does not make a realistic assessment of the financing for the rehabilitation, reuse, and operation of Fort Monroe for the long term. Implementation of your present planning concepts for preservation, education/interpretation, recreation, community life, limited development, and economic sustainability cannot and will not happen because you do not have a viable financial plan. Elected officials from the Commonwealth of Virginia have publicly stated that Virginia will not provide any significant money for the future of Fort Monroe.

A big part of the answer to the financing question is to have full involvement of the federal government and one of the best ways to do that is to have all or part of Fort Monroe to become a part of the National Park System. Your DEIS should have a whole new section on that. The Citizens for a Fort Monroe National Park have the rights ideas on this.
Your section on Wherry is deficient in two areas. You need a fuller and more accurate statement of the baseline conditions and you need a much better assessment of the Wherry Quarter baseline impacts.
Thank you for this opportunity to comment.
Alec Gould
Williamsburg, VA 23188

-----Original Message-----
From: Megan Seabrook [mailto:mgnsbrk@gmail.com]
Sent: Thursday, October 29, 2009 1:51 PM
To: monr post nepapublic
Subject: "Dad Peter Poage" <peterfp@gmail.com>,

Dear Army:

Re:Fort Monroe Draft Environmental Impact Statement
I'd like to request that the DEIS should be reworked in accordance with the suggestion of the Citizens for a Fort Monroe National Park so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions** (3) **properly evaluates Wherry Quarter reuse impacts.** This historic place has personal value per family history relations to it. Thank you for your efforts.
--
Megan Seabrook
Park City UT, 84098

-----Original Message-----
From: Penny Peters [mailto:pannpeters@yahoo.com]
Sent: Thursday, October 29, 2009 1:58 PM
To: monr post nepapublic
Subject: Ft Monroe

Please all Virginians love the one the only ft monroe Please Help!
Request the Army do the following through the EIS (Environmental Impact Statement) process:
* Conduct a thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.
* Respond to the public comments of last fall, which were overwhelming in agreement with the concept of a self-sustaining national park.
* Recognize that Fort Monroe should not be divided up, with portions offered for unnecessary private residential and commercial development.
Thank you
Penny Peters

-----Original Message-----
From: Helen Lynch [mailto:helencraiglynch@verizon.net]
Sent: Thursday, October 29, 2009 3:00 PM
To: monr post nepapublic
Subject: To save Fort Monroe as a National Park

I welcome this opportunity to be an advocate for preservation of a national treasure. I agree with the stand taken by Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that 1) it includes and fully evaluates the option for an innovative national park unit as previously called for by the public 2) properly assesses and classifies **Wherry Quarter baseline conditions** and 3) properly evaluates Wherry Quarter reuse impact. God Bless our Country where the individual's vote counts.
Sincerely,

Helen Craig Lynch
Alexandria, VA 22314-3822
-----Original Message-----
From: jwpeagle@aol.com [mailto:jwpeagle@aol.com]
Sent: Thursday, October 29, 2009 3:14 PM
To: monr post nepapublic
Subject: Ft Monroe as a National Park

I stongly urge that a decision be made to convert Ft. Monroe into a National Park. My Grandfather--William Robertson married Elizabet Bolling who was Grandaughter of Pocahontas and John Rolfe----the public services to which those kin dedicated themselves is a matter of record should be preserved in a way that all citizens might appreciate the tough times they faced in making the USA the land of the free and home of the brave!
Moreover, the part that Ft Monroe played in the Underground Railroad should be heralded as a stepping stone in freeing the Slaves and moving toward fulfilling the dedication to .freedom and justice for all---regardless of race, creed and or sexual orientation
With deepest appreciation to all wh have worked so hard to find the best use of Ft.Monroe for the most citizens of our State and our country.

J W Peyton Robertson
Colonel USMC Ret.
Norfolk, Va.,23507
-----Original Message-----
From: Joe Price [mailto:jsterlingprice@hotmail.com]
Sent: Thursday, October 29, 2009 3:10 PM
To: monr post nepapublic
Subject: Fort Monroe Draft Environmental Impact Statement (DEIS)

Dear Friends:
I'm writing to voice my agreement with Citizens for a Fort Monroe National Park, specifically to the effect that the Army should rework the Fort Monroe DEIS:
1 - To include and fully evaluate the option for a national park unit, as has been previously called for by the public;2 - To properly assess and classify the baseline conditions of the lands known as the Wherry Quarter; and 3 - To properly evaluate all reuse impacts to the Wherry Quarter.

Fort Monroe's historical significance cannot be overstated. While its location is appealing to many in real estate, lands for development are certainly available that do not carry Fort Monroe's historical impact.
Thank you for the opportunity to comment.
Sincerely,
J. Sterling Price, Lt Col, USAF (Ret)
London, Ohio 43140

-----Original Message-----
From: Bob Walton [mailto:pacrat23075@verizon.net]
Sent: Thursday, October 29, 2009 3:57 PM
To: monr post nepapublic
Subject: Fort Monroe

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS :
*Fully evaluate an additional alternative, a significant national park unit operating in partnership with the Commonwealth at Fort Monroe. This alternative is not all coincident with the "Lower Bracket," is a realistic alternative being currently evaluated and is very likely to have more favorable environmental consequences than any of the alternatives evaluated.
*Properly evaluate impact on the Wherry Quarter -- treat its current condition as that of a largely vacant open space, as current structures were always intended as temporary.
* Properly evaluate impact of reuse on the Wherry Quarter -- evaluate impact of addition of permanent structures (at least in Middle and Upper Bracket options) on all resource areas, especially land use, aesthetic/visual resources and cultural resources, recognizing that the impact on many of these criteria, in the "green" edge of the magnificent stone fort and the historic edge of the 196 acres of park and recreation land to the north, will be significantly adverse.
I wish for my children and grand children to continue to visit this historical site and enjoy its past significance.
Thank you,
The Walton Family
Hampton, VA

-----Original Message-----
From: Christy Everett [mailto:CEverett@cbf.org]
Sent: Thursday, October 29, 2009 4:42 PM
To: monr post nepapublic
Cc: Ann Jennings - ext. 301
Subject: comments on the DEIS for the BRAC Actions at Fort Monroe

On behalf of the Chesapeake Bay Foundation, I have attached comments on the Draft Environmental Impact Statement (DEIS) for the Base Realignment and Closure (BRAC) 05 Actions at Fort Monroe, Virginia that was listed in the Federal Register dated September 14, 2009 as a Notice of Availability.
Thank you,
Christy Everett
Chesapeake Bay Foundation
Hampton Roads Office
Norfolk, VA 23510

-----Original Message-----
From: Perreault, Mark D. [mailto:mark.perreault@nscorp.com]
Sent: Thursday, October 29, 2009 4:20 PM
To: monr post nepapublic
Cc: Edwards, Robert Mr CIV USA IMCOM; S. Corneliussen; Steven T. Corneliussen; Samuel R. Martin; Jim; Dorothy; Philip(Work); Philip(Home); Adrian; secins@cavtel.net; louisguy@cox.net; monika; S. Butler; Ron Wilson; alec; Jane; Manny; perreault3@cox.net
Subject: Fort Monroe DEIS - Comments of Citizens for a Fort Monroe National Park

Please accept attached as comments of Citizens for a Fort Monroe National Park on the Draft Environmental Impact Statement for BRAC 2005 Disposal and Reuse of Fort Monroe. We are filing today per Bob Edwards' kind e-mail approval (on October 22) of filing as late as today.

-----Original Message-----
From: louisguy@cox.net [mailto:louisguy@cox.net]
Sent: Thursday, October 29, 2009 6:00 PM
To: monr post nepapublic
Cc: Mark.Perreault@nscorp.com
Subject: Fwd: Fort Monroe DEIS - Comments of norfolk Historical Society

Please accept attached (Mark Perreault letter) as comments of Norfolk Historical Society to endorse and support the comments submitted by the Citizens for a Fort Monroe National Park on the Draft Environmental Impact Statement for BRAC 2005 Disposal and Reuse of Fort Monroe. We are filing today per Bob Edwards' kind e-mail approval (on October 22) of filing as late as today.

-----Original Message-----
From: Virginia Hubbard [mailto:virginia.f.hubbard@gmail.com]
Sent: Thursday, October 29, 2009 7:58 PM
To: monr post nepapublic
Subject: Fort Monroe

I concur wholeheartedly with the Citizens for Fort Monroe National Parkthat the Army should rework the DEIS so that it includes and fully evaluates the option for an innovated national park unit as previously called for by the public; that it properly assesses and classify **Wherry Quarter baseline conditions**; that it **properly evaluates Wherry Quarter reuse impacts**.
Thank you.
Virginia F. Hubbard

-----Original Message-----
From: VCANaccess [mailto:vcanaccess@verizon.net]
Sent: Thursday, October 29, 2009 7:09 PM
To: monr post nepapublic
Cc: Web Pages
Subject: Ft. Monroe National Park

US Army Representatives, Virginia Coastal Access Now (VCAN) stands together with and in support of the Citizens for a Fort Monroe National Park.

In addition to VCAN's previous comment on Fort Monroe as a historical site and for public access for future generations, the US Army should rework the draft environmental impact statement (DEIS). The DEIS should fully consider the option for an innovative national park unit as the public has requested. The DEIS should also properly classify Wherry Quarter's baseline conditions and adequately evaluate its reuse impacts.

Should you have any questions or need additional information, please let us know.

Respectfully submitted,
Mark Feltner, President
"Help provide public access to Virginia's coast"
Virginia Coastal Access Now
Chesapeake, VA 23322

-----Original Message-----
From: KP Vickery [mailto:kp_vickery@msn.com]
Sent: Thursday, October 29, 2009 10:12 PM
To: monr post nepapublic; kp_vickery@msn.com
Subject: Save Fort Monroe as a National Park

Sirs/Madams:
I wish to add my voice to the may who wish to see the unique and priceless Fort Monroe preserved for all Americans. If any place deserves to be a National Park, this one does.
respectfully,
Ken Vickery
Alumni Distinguished Undergraduate Professor
North Carolina State University
-----Original Message-----
From: Trish Ferraro [mailto:trish@va.wagner.com]
Sent: Thursday, October 29, 2009 4:51 PM
To: monr post nepapublic
Cc: Trish Ferraro
Subject: Draft Environmental Impact Statement (the "DEIS") re: Fort Monroe

To Whom It May Concern:

I agree with Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.

Sincerely,
Trish Ferraro
Hampton, VA 23664
-----Original Message-----
From: hvblanchard@cox.net [mailto:hvblanchard@cox.net]
Sent: Thursday, October 29, 2009 9:38 PM
To: monr post nepapublic
Subject: Revise the DEIS for Fort Monroe, Please

Sir:

I agree with Citizens for a Fort Monroe National Park that the Army should revise the DEIS so that the DEIS: (1) Includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public
(2) Properly assesses and classifies **Wherry Quarter baseline conditions**
and (3) **Properly evaluates Wherry Quarter reuse impacts.**

Thanks very much.
Sincerely,
Hugh Blanchard
Major, US Army (Retired)
Yorktown, VA
-----Original Message-----
From: Madison Vipperman [mailto:maddi_vip123@yahoo.com]
Sent: Thursday, October 29, 2009 10:25 PM
To: monr post nepapublic
Subject: Fort Monroe
all of the land at Fort Monroe should remain in public hands and the option of a national park should be seriously evaluated.

-----Original Message-----
From: John Walker [mailto:jtwalker09@suddenlink.net]
Sent: Thursday, October 29, 2009 10:21 PM
To: monr post nepapublic
Subject:

all of the land at Fort Monroe should remain in public hands and the option of a national park should be seriously evaluated.

-----Original Message-----
From: PaulineOC@aol.com [mailto:PaulineOC@aol.com]
Sent: Thursday, October 29, 2009 10:54 PM
To: monr post nepapublic
Subject: Ft. Monroe National Park

I agree with the Citizens for a Fort Monroe National Park that the Army should rework the DEIS so that it includes and fully evaluates the option for a national park and properly assesses and classifies **Wherry Quarter baseline conditions.** Also that it **properly evaluates Wherry Quarter reuse impacts.** Fort Monroe is a national treasure and it should remain intact for the generations to come.

Pauline O'Connell
Williamsburg, VA 23188

-----Original Message-----
From: KELLTRON@aol.com [mailto:KELLTRON@aol.com]
Sent: Thursday, October 29, 2009 11:59 PM
To: monr post nepapublic
Cc: KELLTRON@aol.com; ken@ksmithre.com
Subject: Fort Monroe Environmental Impact Statement

Dear US Authorities,
I have examined the Draft Environmental Impact Statement (DEIS) for Fort Monroe and have found a number of deficiencies which I hope you will correct in the preparation of the Environmental Impact Statement (EIS).
Most disappointing, it seems that the DEIS merely follows the range of alternatives in the FADA reuse plan. I believe the FADA reuse plan, like the FADA itself, has essentially been compromised by parochial political and financial interests that don't reflect the best use of the property for the public. Nor do I believe that the public's opinion has been given proper weight in the evolution of the DEIS. I also believe the National Park Service is the best entity to safeguard this property for the public (the owners). The DEIS has no significant consideration of this option which the public favors. Therefore, I believe the flaws in the DEIS are deep indeed.
I also do not believe that the local authorities are capable of objective treatment of this property for the public benefit. In fact, I also believe the local authorities are essentially contaminated with various financial and personal interests whose ideas of what to do with Fort Monroe do not comport with the public interest, but primarily with their own interests.
In the EIS, we would like the Army to do a much more robust assessment of how commercial or residential development would impact the local water quality.
1. We would like to see a robust environmental study that goes far beyond typical water and air quality studies of direct impacts. Given the environmentally sensitive location of the property, we would like a full blown ecological study of direct and indirect impacts to the flora and fauna as well.
2. We do not want the property divided into parcels for development that is not absolutely necessary for sustaining a National Park or entity as similar to that as possible.
3. We do not think any of the property per se should be privatized at all. What private businesses may be granted concessions, should be done under the auspices of a public authority lease, not privatization of public land.
4. We would like to see a thorough study of a wide range of alternatives uses. We believe a self-sustaining National Park under the auspices of the National Park Service is the most preferable general solution.
5. Considering that the public also favors preservation as a public place, preferably as a National Park, we want the public opinion given primacy over the parochial interests that would privatize this public land.
6. We also want the EIS to favor Historical Preservation over other uses. The property represents a once in a lifetime opportunity for hstoric scholarship and cultural enrichment that transcends America's various deographic and cultural groups. In other words, Fort Monroe represents an unparallelled opportunity to bring more harmony to our diverse society by preserving the various cultural heritages of many into one iconic public place.

Sincerely,
Kelly V. Place
Director of Research and Policy - Virginia State Waterman's Association

-----Original Message-----
From: Kathryn Hamilton [mailto:kathrynhamilton@cox.net]
Sent: Sunday, November 01, 2009 9:31 PM
To: monr post nepapublic

Subject: re: Ft Monroe: National Park Use for the property (all the fort and evnirons owned by the aRmy)

As a citizen of Hampton, the state of VA and as a US citizen, I ask the Army's kind and attentive view and review of the impact that a National Park option for Ft Monroe VA would make for our country. A National park would birng the very kind of industry we need to our area--clean--alternative use of coastal lands that will be impacted within my lifetime by climate change, and preserve the olde and the natural parts of the fort for all citizens to enjoy and all citizens to beneift from historically and environmentally (we have wildlife sanctuary for birds,etc right now on this fragile Peninsula). A national treasure in so many ways, I walk the Fort often in the late afternoons and current residents realize fully how very special their neighborhood is. I am amazed at he pride and attention to detail given upkeep of quarters given by military families who currently make their homes at the fort.

Their love of the fort and its surroundings are shared by so many of us who can only visit. Mnay of us would love right now for certain quarters to beopen for "vacation" and short break type rentals as this is a bit of Hampton that takes you miles away from home in short time by car. Maybe one day that will be possible. Many Hamptonians would like to share this treasure with the nation. I think of the Presidio as a model for the Fort. Ft Monroe is a refuge from the blight of too much urban wasteland in Hampton (we have seen how the City deals with green space--they don't see the need for it and we have precious little of it now) nor does the city have the resources to clean up and maintain the /forth and its land. The City of Hampton is not a worthy keeper of this place of --it is sacred. The Army needs to honor the achievements and sacrifices of hundreds of men and women who have lived and worked at the fort (fortification has been at Pt Comfort as early as the late 1500s) and that cannot be achieved by making the fort an expensive, and unsustainable (ecologically and financially) private housing development. If you want to see the old plantation in Kings Mill (near Williamsburg) you have to be invited onto the property (gated) and this cannot be allowed to happen at Ft Monroe. I fear a defacto "off limits" to the public via a closed "gates only" high end residential housing area would be the elimination of this beautiful area that so many love and want to share from the hearts, minds and history of our state and our country. (how many students of American history currently know of the Hampton Roads Accords and other events of historical significance that the fort has been an integral part of)... too many will never know if the fort is closed to current and future generations. As a citizen I respectfully ask that the Army rework the DEIS so that it (1) includes and fully evaluates the option for an **innovative national park unit,** as previously called for by the public (2) properly assesses and classifies **Wherry Quarter baseline conditions**, and (3) **properly evaluates Wherry Quarter reuse impacts**.. Thanks very much for all efforts in this regard.

Sincerely,

Kathryn Hamilton,

Resident of Hampton ,Virginia and "friend' of Ft Monroe

No.	Source	Page/Para/Line	Subject	Comment	Response
1	EPA Region III	2/2/-	Alternatives	EPA questions whether the Early Transfer Disposal Alternative is a viable alternative since there is still ongoing investigation work to be conducted in 2009 and 2010 resulting from nonconcurrence to the Community Environmental Response Facilitation Act (CERFA) Report by the Virginia Department of Environmental Quality (VDEQ) as a result of perceived data gaps.	The Army continues to work on resolving the CERFA concurrence issue with VDEQ. Army considers the Early Transfer Disposal Alternative a reasonable alternative for inclusion in the EIS. If Army determines to transfer the non-reversionary property under the Early Transfer provisions, the deferral of the CERCLA covenant must be approved by the Governor of the Commonwealth of Virginia.
2	EPA Region III	2/3/-	Alternatives	The purpose of the analysis is to provide data to help decision makers choose the best reuse alternative, and the Army can interpret its analysis to recommend the best scenario suitable for the site. Considering that Fort Monroe is a barrier island on a 100-year floodplain with extensive historical significance, it would seem reasonable that the Lower Bracket Scenario which is most compatible to existing land use conditions would be most conducive to the preservation and protection of the natural and historic resources on Fort Monroe.	The purpose of the NEPA process in a BRAC transfer is to assist the disposal decision-maker in selecting transfer mechanism and to inform the reuse decision-maker in selecting a reuse. Because the Army is not the reuse decision-maker, the EIS does not select or recommend a preferred reuse. The EIS does identify a variety of potential mitigations that could be selected by either the Army, if appropriate, or the reuse authority to lessen the impacts of disposal and/or reuse.
3	EPA Region III	2/4/-	General	Based on our review, EPA has rated the environmental impacts of the DEIS an "EC-2" (Environmental Concerns / Insufficient Information), which indicates that we have environmental concerns regarding the proposal and that there is insufficient information in the document to fully assess the environmental impacts of this project. The basis of this rating is the concerns with hazardous and toxic substances, floodplains, stormwater management, water resources, and terrestrial habitat.	Comment noted.
4	EPA Region III	4/2/-	HazToxSubs	Because investigations are still underway and uncontaminated parcels have not been identified and agreed upon, it is not feasible to consider the Early Transfer Disposal Alternative. Until further site investigation is complete and designations determined, it is difficult to consider the Early Transfer Alternative therefore to remain within the context of the DEIS time frame, it would be prudent to look only at the Traditional Disposal Alternative.	The Army continues to work on resolving the CERFA concurrence issue with VDEQ. Army considers the Early Transfer Disposal Alternative a reasonable alternative for inclusion in the EIS.
5	EPA Region III	4/3/-	Floodplains	As stated on page 4-61, "According to the Federal Emergency Management Agency, Fort Monroe is located entirely within the 100-year floodplain, with the majority of Fort Monroe classified as having flood levels ranging from 9 to 10 feet." How has this information impacted the Reuse Plan since housing/residential communities planned would be at a significant risk?	The comment questions how the floodplain impacts the Reuse Plan. The Army is not in a position to directly respond because it is neither the author nor the proponent of the Reuse Plan. Army can only respond as the agency responsible for analyzing the environmental impacts of the Reuse Plan. The potential for flood damage has been significantly reduced by implementation of the flood control measures described in the 2005 Environmental Assessment for Flood proofing and Shoreline Stabilization Measures, Fort Monroe, VA. Nevertheless, the potential flooding risk still exists. Additional analysis was performed and text is added to the final EIS to address flooding risks and to identify potential mitigations.
6	EPA Region III	4/5/-	Soils & Stormwater Management	Considering soil type and increased impervious surfaces proposed could adversely impact soil erosion, EPA questions whether there are best management practices suitable for the unique characteristics of the island and suggests that they be mentioned and addressed in the FEIS.	A more extensive list of BMPs and potential mitigations has been added to the final EIS. The peninsula that is Fort Monroe has been under constant development since the early 1800's. Through this time, there is no indication that it is or would in the future be impracticable to implement effective soil erosion management practices. Recent surveys have in fact determined that the island is growing in size.

No.	Source	Page/Para/Line	Subject	Comment	Response
7	EPA Region III	5/1-2/-	Water Resources & Cumulative Effects	Page 4-62 mentions a new seawall and breakwater project but it does not mention the status of this project. Is it in progress, is it complete? If it is underway, the cumulative impacts of this project need to be addressed. Other pertinent information should be provided, such as location, size, purpose, environmental impacts, etc. Is this project addressed in another environmental document? Also mentioned within this section on the same page, is that a marina expansion is planned, but no information was provided in the DEIS. Again, EPA is concerned with the cumulative environmental impacts and questions whether this project will be addressed in another environmental document.	An Environmental Assessment was completed in July 2005 (Flood proofing and Shoreline Stabilization Measures, Fort Monroe, VA). The new seawall is completed and while a series of breakwaters have been completed, it is unlikely the breakwater project will be constructed to the extent described in the July 2005 EA. Additional information regarding the marina expansion is provided in the final EIS. The final EIS recognizes that expansion will be subject to various regulatory controls, and identifies potential mitigations that may be applicable to lessen the environmental impacts of the expansion.
8	EPA Region III	5/3/-	Beach Nourishment	Page 4-103 states that under the Middle Bracket Scenario, "A northern connection between Fort Monroe and Buckroe areas may be constructed and beach nourishment along the Chesapeake Bay shoreline may occur. Following the PA, such construction would be beneficial to the Historic District by restoring the shoreline and enhancing the feel of the fort" The text should quantify to some degree the extent of this proposed project to consider environmental impacts. Also, it should be stated whether future environmental documentation would result for this proposed project.	The impacts resulting from constructing a vehicular access roadway and bridge are discussed in 4.8.2.5 of the Final EIS. The need for beach nourishment is less of a need than once thought because the headland breakwaters are doing an excellent job of retaining sand along the Chesapeake Bay shoreline. These projects will be subject to the applicable state and federal regulations and permits discussed in the EIS. The proponent is responsible for environmental documentation required for each project. Potential mitigations are also identified in the Final EIS.
9	EPA Region III	5/4/-	Terrestrial & Aquatic Resources	Page 4-21 states that, "With the Middle Bracket Scenario, there would be a 5 percent (15 acres) loss of open space and one percent loss of natural areas and their respective viewsheds in comparison to the baseline condition and results in a minor long-term adverse effect." Page 4- 177 states that, "Development will physically eliminate or diminish the character of highly disturbed natural resources on up to 25 acres of open green space and limited river bottom habitat for the construction of up to 5 docks." The DEIS should identify and quantify the types of natural resources impacted and lost. The impacted areas should be described to have a better understanding of the specific impact/loss.	Additional text is added to the DEIS to describe these adverse effects.
10	EPA Region III	5/5/-	Wetlands	The DEIS states that if the northern entrance were to be constructed in the future, then up to one acre of wetland habitat may also be disturbed. The FEIS should describe the wetlands that may be impacted.	The general the type of wetland is described elsewhere in the EIS, but is also reiterated in this section. As stated in the EIS, "project-specific wetlands delineation, permitting, and wetlands avoidance and/or mitigation requirements will be conducted prior to construction, in consultation with the USACE, Norfolk District." This process would occur in the future.
11	EPA Region III	5/6/-	Terrestrial Habitat	Page 4-68 states that, Fort Monroe has close to 650 oak trees, 500 of them being "live oaks." "The Fort Monroe area is the northern-most habitat of live oak and several specimens on the installation are believed to be over 400 years old." Will the reuse alternatives impact the historic trees? The FEIS should identify and quantify the impact to terrestrial habitat, if any.	Additional text is added to the DEIS to describe these adverse effects.

No.	Source	Page/Para/Line	Subject	Comment	Response
12	VDOT/Heuer	1/Comment 1	Traffic & Transporta-tion	The DEIS indicates the Middle and Upper Bracket redevelopment scenarios will cause "short and long term minor to significant adverse impacts to roadways in the vicinity of Fort Monroe". The DEIS indicates redevelopment of Fort Monroe would result in poor levels of service and extensive queuing at several key intersections. The DEIS does suggest the improvements necessary to mitigate these impacts, but offers no solutions on how these improvements will be funded and implemented.	CEQ and Army regulations require that an EIS include the analysis of environmental and socioeconomic impacts that may result from the action and the identification of potential mitigations addressing the impacts. For those identified potential mitigations implemented by non-Army entities, the final EIS also discusses, to the extent determinable, the likelihood that those potential mitigations will be implemented. Decisions to implement those potential mitigations and the funding mechanisms are within the authority of state and local government governments and are outside the scope of this EIS.
13	VDOT/Heuer	1/Comment 2	Traffic & Transporta-tion	I am concerned previous comments made by Secretary Homer on November 4, 2008 have not been addressed in the DEIS. Comments #4 (providing alternate transportation modes) and #5 (development of a Transportation Demand Management Plan) have not been satisfactorily addressed. I have attached Secretary Homer's letter and ask that it become part of the official record for this EIS.	The discussion in "Section 4.11.1.3 - Public Transportation" addresses these concerns. The following is stated: "During the initial 2006 reuse development planning, recommendations stated that a majority of the bus stops be marked with highly visible signing and that actively used areas within Fort Monroe should be considered for transit stops with shelters. This recommendation relative to enhance transit features was made with the expectation that a more attractive transit facility would increase ridership, and therefore reduce the amount of vehicle trips traversing to and from and within Fort Monroe." It is also stated in Section 4.14: "certain management measures may be implemented by the Army or the FMFADA in order to successfully manage the disposal and redevelopment of Fort Monroe according to the principles of sound and sustainable planning as outlined below, (fifth bullet) Providing transit oriented developments, transit options, bike paths, shuttles, and ride-sharing between commuters to minimize greenhouse gas emissions." These statements in themselves relate to Travel Demand Management to reduce vehicle trips. The development of a transportation demand management plan is included in the final EIS as a identified potential mitigation.
14	VDOT/Heuer	1/Comment 3	Traffic & Transporta-tion	I am concerned previous comments from my January 9, 2009 letter have not been addressed in the DEIS. Comments #3 and #6 (analysis of 1-64 impacts) and #4 (internal residential capture rate) have not been satisfactorily addressed. I have attached my January 9, 2009 letter and ask that it become part of the official record for this EIS.	In previous comment responses with VDOT it was indicated that all recommendations made to the local street network were to minimize any potential of queues impacting mainline I-64 operations. Therefore, an analysis of I-64 is not necessary. Section 2.1.1 (including Table 1) of the Traffic Impact Analysis contains a full discussion on internal residential trip generation. The referenced letter is included in the Final EIS and in the Administrative Record.
15	VDOT/Heuer	2/Comment 1	Traffic & Transporta-tion	Does Figure 2 depict Atlantic Avenue as an existing ingress/egress to Ft. Monroe?	Figure 2 is modified to not depict Atlantic Avenue as an existing ingress/egress to Fort Monroe.
16	VDOT/Heuer	2/Comment 2	Traffic & Transporta-tion	Data from the Phoebus Neighborhood Planning Study was not seen in the appendix. Was growth applied to these intersections to match 2008 data?	Data from the 2006 Phoebus Neighborhood Planning Study are not grown because the study had been completed so close to the beginning of this project. Furthermore, the Phoebus community is currently built-out with little or no growth during and after the redevelopment of Fort Monroe.

No.	Source	Page/Para/Line	Subject	Comment	Response
17	VDOT/Heuer	2/Comment 3	Traffic & Transporta-tion	Table II does not include a growth rate for Interstate 64. Between existing and design year conditions how are the background volumes addressed that use the interstate? Several figures appear to show no growth applied to design year volumes for I-64. Please review. Additional site trips using I-64 should be added to the background traffic and analyzed to determine interstate freeway, merge or diverge operations as appropriate.	Analysis was not performed for I-64 under any scenario, therefore a growth rate was not required.
18	VDOT/Heuer	2/Comment 4	Traffic & Transporta-tion	The report recommends improvements that impact limited access, affect right of way and maintenance of traffic operations along 1-64. How will these concerns be addressed? Because of severe congestion in this area, the viability of these improvements as they relate to maintenance of traffic, sequence of construction and road user cost should be noted beyond a conceptual stage for impacts to traffic operations?	In accordance with CEQ and Army regulations, the final EIS identifies these transportation improvements as potential mitigations that could be implemented by others. Given the long-term nature of redevelopment, regional growth, and their associated uncertainties, a conceptual approach is considered appropriate and reasonable. The decisions on whether to adopt these mitigations and how these would be funded and implemented are within the authorities of state and local government.
19	VDOT/Heuer	2/Comment 5	Traffic & Transporta-tion	The appendices should include data to support the 95th queue lengths found in the respective tables.	Queuing results are supplemented in the Appendix.
20	VDOT/Heuer	2/Comment 6	Traffic & Transporta-tion	Several delay values for overall intersection increase with the addition of recommended improvements. This seems abnormal. Explain?	The main reasons why this happens is signal timing optimizations and split/offset modifications.
21	VDOT/Heuer	2/Comment 7	Traffic & Transporta-tion	Considering the segment of links to be a known length. How do the queues of individual movements relate to the available capacity of the approach?	The local street Synchro network used in all analyses was from the City of Hampton, and reflects actual signal timings at each intersection. Since the nature of the corridor is "interruptive" (due to the signalized intersections), the queuing analysis of the corridor needed to be analyzed by segment at each intersection approach, and not cumulatively over the entire corridor length. In addition, based on comments received from the City of Hampton, the city supports and implements a consistent signal timing program throughout the city to address peak hour queues, while providing optimized signal operations.
22	VMRC	1/-/-	Water Resources	Please be advised that the Marine Resources Commission, pursuant to Section 28.2-1204 of the Code of Virginia, has jurisdiction over any encroachments in, on, or over any State-owned rivers, streams, or creeks in the Commonwealth. Accordingly, if any portion of the subject project involves any encroachments channelward or ordinary high water along natural rivers and streams, a permit may be required from our agency.	Comment noted.
24	FMFADA /Matrix	1/Comment 4	General (Trans/Noise)	Of the twelve resource areas considered in the Draft EIS, only transportation and noise are expected to have significant adverse effects. Although mentioned in the Draft EIS, we believe it should be emphasized that the adverse effects noted in the Draft EIS will occur gradually over time during implementation of the Reuse Plan, with the maximum significant adverse effects projected to occur approximately twenty years from closure (i.e., in calendar year 2031). In our professional opinion, it would be very useful and beneficial to both the U.S Army and the FMFADA to clarify and emphasize this point, particularly in the Executive Summary of the EIS.	Additional text was added to the Executive Summary as suggested. Reference to the City of Hampton ordinance adopted in response to the Langley AFB AICUZ has been removed because the noise from jet fighter takeoffs and landings protected against at Langley is decidedly different from the kind of noise heard at Fort Monroe. It is explained that the modeled significant impact will occur only in Phoebus and only when the projected increase in noise from traffic along certain limited corridors is added to noise increases due to projected regional growth. Identification of these effects as "significant" is due to the fact that the noise model projects a cumulative increase that is 1/2 dB DNL above the 5 dB DNL increase and the 70 dB DNL noise level normally defined as "significant." Nonetheless, the modeled noise levels projected for both Phoebus and Fort Monroe will remain typical of most similarly developed urban areas.

No.	Source	Page/Para/Line	Subject	Comment	Response
25	FMFADA /Matrix	1/Comment 6	Management Measures	Before voluntarily agreeing to any of the management measures presented, we strongly recommend further analyses and collaboration with other project stakeholders, as appropriate, to determine the viability and effectiveness of the proposed measures.	In accordance with 32 CFR 651.15(d), 40 CFR 1502.16(h), and 40 CFR 1505.2(c), the references to "recommendations" and "management measures" have generally been redefined in the final EIS as "identified potential mitigations" that may be performed by Army or others, unless such actions are required by law or are incorporated into and are part of the Reuse Plan. Mitigations may fall into one of three types: (1) agreed-to mitigations, (2) potential mitigations for consideration by others, and (3) potential mitigations that may be performed by the Army as part of the transfer mechanism. Numerous important cultural resource mitigations are identified in the Programmatic Agreement (PA). The "agreed-to" mitigations contained in the PA are being implemented by agreement. These are considered "mitigations," as opposed to "potential mitigations." Potential mitigations for consideration by others are identified for consideration by the FMFADA and governmental units as appropriate. Army does not require or recommend their implementation, voluntarily or otherwise. Finally, the EIS identifies mitigations that the Army may perform. These generally include deed restrictions on the non-reverting property, certain actions that may occur during the environmental restoration of the property, and certain actions that would occur prior to transfer.
26	FMFADA /Matrix	1/Comment 7	Noise	Related to the assumptions used to establish the baseline noise condition presented in the Draft EIS: For the purposes of this document, the U.S. Army has assumed that the results of a 1984 noise measurement field study conducted by the Army Environmental Hygiene Agency are representative of the noise levels currently experienced at Fort Monroe. In follow-up to Comment Number 6 above, before implementing any of the management measures recommended in Section 4.15.4 of the Draft EIS during reuse, we would recommend that the FMFADA conduct additional noise monitoring to validate the acceptability of the previous work and to determine the viability and effectiveness of the proposed measures.	The conduct of additional noise studies by the FMFADA or other responsible local government agency has been added to the final EIS as an identified potential mitigation. Army does not assume that the noise levels reflected in the 1984 field study are reflective of noise levels currently experienced at Fort Monroe. In fact, Fort Monroe employees have commented that they have a decidedly different impression. The modeled future noise level resulting from redevelopment is not in any way based on the 1984 study that is used as a baseline for comparison only. Although the noise levels measure in 1984 and the modeled noise levels resulting from reuse are near or slightly above certain standards, the EIS recognizes that these noise levels are typical for the Hampton area and other similarly situated communities. While the City of Hampton requires noise abatement for new residences constructed with in the Langley Air Force Base 65 dBA Day Night Level (DNL) noise contour, the purpose of the abatement may be to lessen the impact from the much higher Single Exposure Levels (SELs) which are the peak noise levels generated by aircraft takeoffs and landings. These peak noise levels may exceed 100 dBA over a period of several seconds. These peak noise levels would not be experienced at Fort Monroe. Finally, it should be noted that the noise contours surrounding Langley AFB are also the result of noise modeling, as opposed to noise measurement. See http://www.vpar.com/PDF/AFnoiseBrochure.pdf for additional information in regards to the generation and use of the Langley AFB noise contours.

No.	Source	Page/Para/Line	Subject	Comment	Response
27	FMFADA /Matrix	1/Comment 8a	General	In the Draft EIS on page 4-85, lines 25-27, a statement (about the northern roadway connection) that could be considered contradictory to the recommendations presented in the approved FMFADA Reuse Plan is attributed to a FMFADA employee. Based on our conversations with the FMFADA employee, we believe the information that was relayed was misunderstood by the U.S. Army's contractor and recommend that this statement be removed in the Final EIS.	The statement was removed and reworded throughout the document.
28	FMFADA /Matrix	1/Comment 8b	Wetlands	If the northern roadway connection is constructed at some point, it is highly likely that wetlands habitat would be disturbed. To minimize impacts to this sensitive resource, project-specific wetlands delineation, permitting, and consultation will be required prior to design and construction. We recommend that this wetlands consultation work be initiated as soon as feasible in the development of preliminary alignments for the roadway connection to minimize future potential schedule and cost impacts to the FMFADA and other project stakeholders.	Early initiation of wetlands delineation and consultation prior to selection of the roadway alignment has been added as an identified potential mitigation in the final EIS. Early initiation of these activities will assist in minimizing wetlands impact by the selection of a proper road alignment and design and construction methodologies. Such a study could also include consideration of post-construction mitigations.
29	Hampton City Mgr.	2/Comment 1	Traffic & Transporta-tion	Page 4-85, line 26 - 28. Consider removing statements referring to the likelihood of constructing a northern entrance to the property. As noted on page 4-85, the proposed access road is included in the Fort Monroe Reuse Plan adopted by the FMFADA. This access is also referenced in the City of Hampton's Buckroe Master Plan (2005).	The analysis and text have been modified to conform with the Reuse Plan and be consistent with the Buckroe Master Plan.
30	Hampton City Mgr.	2/Comment 2	Socio-economics	Page 4-114, line 30. References to economic impacts here and at a number of other locations in this section of the document note that "these effects would largely be localized, would not effect the ROI (region of influence) equally". This assessment appears to potentially diminish or underestimate the negative economic impacts on the local community. While the region as a whole may suffer negligible economic impacts, it appears that impacts to the local community may be significant. Consider revising this section of the document to provide a more complete assessment of these impacts.	Included an analysis of a sub-ROI, which includes the City of Hampton. The sub-ROI will have more impacts than the greater ROI, but these are not considered significant impacts.
31	Hampton City Mgr.	2/Comment 3	Traffic & Transporta-tion	Page 4-137, line 4 - 6. In the late 1990's the City completed several streetscape projects on Mallory Street from I-64 to County Street and on Mellen Street from Mallory to the Mellen Street bridge. The project included such features as curb bulb outs, raised crosswalks, and medians. The City will not be undertaking any future projects to convert Mallory Street or Mellen Street into 4-lane roadways. As such, it will not be geometrically possible to create dual northbound left turn lanes on Mellen Street to turn on to westbound Mallory Street.	In accordance with 32 CFR 651.15(d), 40 CFR 1502.16(h), and 40 CFR 1505.2(c), the references to "recommendations" and "management measures" have generally been redefined in the final EIS as "identified potential mitigations" that may be performed by others unless such actions are required by law, or are incorporated into and are part of the Reuse Plan. (See Response to Comment # 25.) Potential mitigations for consideration by others are identified for consideration by the FMFADA and governmental units as appropriate. Army does not require or recommend their implementation, voluntarily or otherwise. Where mitigations are to be performed by others, the EIS is required to evaluate the probability that such mitigations will be implemented. Based on the City of Hampton's comment, the referenced mitigation will be assigned a probability of "highly unlikely."

No.	Source	Page/Para/Line	Subject	Comment	Response
32	Hampton City Mgr.	2/Comment 4	Traffic & Transporta-tion	Page 4-137, line 7 - 8. We are in agreement that the addition of an exclusive southbound left turn lane (on I-64 westbound off-ramp to Mallory Street) and addition of a westbound right-turn lane on Mallory Street would improve traffic operations at this intersection. The length of the right turn lane may be very minimal without significant impacts to the business at 236 S. Mallory Street.	The final EIS will note that the City of Hampton concurs in this potential mitigation, increasing the probability of its implementation in whole or in part.
33	Hampton City Mgr.	2/Comment 5	Traffic & Transporta-tion	Page 4-137, line 9 - 10. This is a one lane VDOT controlled off-ramp. The primary existing turning movements are left turns. This recommendation should be reworded to clearly indicate that the existing one lane ramp will need to be widened to accommodate three lanes (dual left turn lanes and one right turn lane).	Text was modified accordingly.
34	Hampton City Mgr.	2/Comment 6	Traffic & Transporta-tion	Page 4-137, line 11 - 14. This recommendation should be reworded to clearly identify that the I-64 eastbound off-ramp (which is actually identified as Settlers Landing Road) is to be remarked for 2 left turn lanes, one thru lane, and a shared thru/right lane.	Text was modified accordingly.
35	Hampton City Mgr.	2/Comment 7	Traffic & Transporta-tion	Page 4-137, line 15-17. The City has an ongoing traffic signal timing program and continually updates timings every 3-4 years to reflect current conditions in corridors. The lack of sufficient capacity at the eastbound approach of the Hampton Roads Bridge Tunnel, especially during weekday AM and PM peak hours as well as Saturday and Sundays peak periods will restrict through movements on the mainline of I-64 with or without development. Capacity constraints during the above noted time periods on westbound I-64 at the Hampton Roads Bridge Tunnel also meter flows in the area of the Mallory and Woodland interchanges.	Army concurs with the City of Hampton. The existing overcapacity conditions at the tunnel approaches and the resulting metering of flows is the basis for the Army's position that the development of Fort Monroe will not significantly impact the already existing problems.
36	Hampton Roads Military and Federal Facilities Alliance. (HRMFFA)	1/Bullet 1	Traffic & Transporta-tion	Increased use of the fort by tourists and potential future residents and employees may raise issues with orderly traffic flow to and from the fort, particularly with regard to Interstate 64 as well as surface roads within the fort and adjacent portions of the City of Hampton. HRMFFA recommends further study and coordination between FMFADA, the City of Hampton and the Virginia Department of Transportation (VDOT) to ensure the most effective access to and from the fort while minimizing negative impacts on Hampton Roads' already stressed transportation infrastructure.	The suggested coordination is added to the final EIS as an identified potential mitigation. The traffic study recognizes that the significant traffic impacts from the reuse of Fort Monroe will be limited to the surface streets within the City of Hampton, as opposed to I-64.
37	HRMFFA	2/Bullet 2	Global Warming/Sea Level Rise/Storms	*(There should be)* adoption of a mitigation strategy to address potential flood hazards related to sea level rise and hurricane effects. Ensure compliance with flood insurance requirements.	A study of potential strategies for mitigating the effect of sea level rise and hurricanes is added to the list of identified potential mitigations in the final EIS.
38	HRMFFA	2/Bullet 3	Infrastructure	(The FMFADA should) ensure adequate infrastructure, particularly water, wastewater treatment, natural gas and electricity, is in place to accommodate any reuse plan . Analysis of infrastructure upgrade or replacement costs should be done to ensure funding is in place or is accurately projected to meet infrastructure needs.	The comment urges an action on the part of the FMA (formerly the FMFADA). The Army is not in a position to directly respond on behalf of the FMA. Army can only respond as the agency responsible for analyzing the environmental impacts of the Reuse Plan. Army will provide the FMA with information on the Fort Monroe utility systems. Section 7 of the Reuse Plan already considers infrastructure needs, planning, and costs, and is therefore considered to be part of the reuse. Estimated Costs are detailed in Figure 7.4 of the Reuse Plan.
39	HRMFFA	2/Bullet 4	HazToxSubs/ UXO	*(The Army should)* conduct comprehensive investigation and analysis of potential presence of hazardous substances and munitions prior to transfer of the property.	Cleanup of fort Monroe is discussed in Section 4.13.1.4 of the EIS. It is highly probable that the referenced studies will be completed prior to transfer.

No.	Source	Page/Para/Line	Subject	Comment	Response
40	Citizens for a Fort Monroe National Park (CFMNP)	1/3/1-4	General	We believe the DEIS fails to grasp the full environmental value and potential of this national treasure. It recognizes its historic assets to a degree (see pp. ES-2, 4-90- 4-94) but in other respects tends to understate Fort Monroe's scenic, visual, and cultural value (e.g., "Fort Monroe has no wild or scenic rivers or magnificent topography", p. 4-13).	The value and historic nature and natural beauty of Fort Monroe is presented throughout the DEIS. The statement that Fort Monroe has no wild or scenic rivers or magnificent topography (e.g., mountains or canyons) is a true statement, however. Page 35 of the NPS's May 2008 Fort Monroe Hampton, VA Reconnaissance Survey states "This reconnaissance study did not reveal information indicating that natural resources associated with Fort Monroe are of potential national significance." Army understands that aesthetic values are subjective in nature. While Army can concur that the surrounding bodies of water possess strong aesthetic attributes, these water bodies are not wild and would not be characterized as scenic within either the context of the Wild and Scenic Rivers Act or NPS criteria.
41	CFMNP	1/3/4 to 2/1/1-2	General/ Baseline	On the Wherry Quarter the DEIS treats the mostly temporary Army structures there (e.g., the bowling alley, gas station/convenience store, Wherry housing, etc.) as permanent buildings, using them as a baseline against possible erection of permanent buildings to replace them - this of course results in comparing the environmental impact of projected new buildings against the current clutter of temporary buildings, rather than against a largely vacant Wherry Quarter without its thrown-up post World War II, never intended to be permanent buildings. This undervaluing of the current Fort Monroe inevitably leads to understating environmental impacts of the various reuse schemes, particularly when it comes to land use, aesthetic/visual resources, cultural resources and cumulative effects.	There is no basis for concluding Wherry Housing units are either thrown-up or temporary in nature. These are in fact historically significant structures subject to the nation-wide "Program Comment for Capehart and Wherry Era Army Family Housing and Associated Structures and Landscape Features (1949-62)," approved by the ACHP in 2002. The intent is to refurbish and continue using these structures as residential housing. The remaining substantial, brick-clad structures that predominate the Wherry Quarter are also permanent construction.
42	CFMNP	2/1/2-end	General/ Wherry Quarter	The Wherry Quarter is designated as "undetermined" in use in the reuse plan, but notwithstanding this the DEIS engages in certain speculations about the range of possible changes here. The Quarter needs the highest level of environmental scrutiny, as apparent plans to develop it threaten to create a character destroying barrier between green areas to north and historic assets to south, thus permanently preventing Fort Monroe from reaching its potential as a unified, seamless environmental and historic jewel for region and nation.	The EIS is required to analyze the environmental impacts resulting from a range of reasonable alternatives. The EIS meets this requirement. The potential adverse effects associated with developing the Wherry Quarter are addressed as part of the Upper Bracket scenario in the DEIS. Additional text was added to address adverse effects to the landscape.

No.	Source	Page/Para/Line	Subject	Comment	Response
43	CFMNP	2/2/all	General/ Wherry Quarter	The DEIS suffers from being overly general. For example, in treating the impacts of varying levels of development in the Wherry Quarter on land use, aesthetic/visual resources and cultural resources, the DEIS is remarkably unspecific in describing the likely impacts. On page 4-12, as one illustration, the DEIS determines that the "Upper Bracket" level of development is no more than moderately adverse to Fort Monroe land use principally by a quantitative calculation of open space to be lost overall on the 570 acres. But there is no qualitative identification of the impact of such development (other than the generic classification of impacts as minor, moderate or significant) - where exactly are these additional buildings going to be placed, what will they do to green space (or green space after temporary Wherry Quarter buildings removed) between northeast rampart of stone fort, Chesapeake Bay, Mill Creek and the 196 acres of designated green space, to the viewsheds to and from the northeast rampart of the stone fort (and to and from the Bay, the 196 acres of open space and the Wherry Quarter land) or to the overall linkages between the historic areas and green space and Chesapeake bayfront?	A generic approach is used to address adverse effects because the exact location of structures has not been determined for the Wherry Quarter. Generically, the Reuse Plan states that the development will attempt to locate new and replacement buildings at former building locations and in a manner that preserves the existing circulation patterns. The loss in open space was not the only factor taken into account when assessing effects. In any event, additional text was added to address adverse effects to the landscape associated with the Upper Bracket scenario.
44	CFMNP	2/3/all	National Park Alternative	The three reuse options do not address a national park unit at Fort Monroe. That the possible national park unit under consideration is undefined should be no more a reason not to consider it as an alternative than that the reuse plan is largely unspecific.	A separate National Park alternative is not considered a reasonable alternative for the disposal of Fort Monroe property. Additional discussion is added to the EIS describing the assumption that historical resources will be managed by a "uniformed" agency in accordance with the PA and NPS guidelines. The impact analysis determined that the type of management agency, whether it be federal, state, or local, will not result in significantly different comparative impacts on the resources as long as the same management standards are followed.
45	CFMNP	2/4/all	Land Use	In evaluating land use, we did not locate any consideration of the larger needs of the region for public open space, especially along the water. The recent Trust for Public Land Study is not even mentioned, despite the fact it was presented to FMFADA earlier this year, and the report and its author, Peter Harnik, are not listed in references (DEIS, Part 7). Indeed core Hampton Roads is markedly deficit in public open space along the water and thus maximizing Fort Monroe acreage in open space, and attaining seamless linkages of open space to historic properties, are critical from an environmental standpoint.	Beginning on the fourth page of the EIS and throughout the EIS, the analysis of environmental effects takes into account the Reuse Plan objectives of "Assuring the property is open and accessible; [and] Establishing a large-scale open park space." The purpose of EIS in this respect is to compare how the reuse alternatives impact the local and regional public open space resource, as opposed to comparing the existing regional open space resource to other areas of the country or drawing conclusions on whether there is larger need for more public open space. While these are important questions, their resolution is reserved to state and local governmental entities rather than this EIS. Ultimately, removal of the post-9/11 security measures will result in more convenient public access to Fort Monroe's public open spaces. As requested, the Trust for Public Land Study was reviewed and added to the reference section, and is discussed in the FEIS. Combining statistics from the study and U.S. census data, the FEIS concludes that the five-city Hampton Roads study area has a higher PER CAPITA park acreage and public shoreline, and more total miles of shoreline park (see Table 6 of the Study), than Boston, New York, or the three-city San Francisco metropolitan area.

No.	Source	Page/Para/Line	Subject	Comment	Response
47	CFMNP	3/-/R1 - bullet 1	Land Use	Restate baseline conditions, recognizing its value as highly accessible public grandstand, environmental demonstration project and educational base for public appreciation for the Chesapeake Bay and its restoration, which potentially can only be reached through the highest level of environmental protection, particularly on the acreage northeast of the moated stone fort.	The commenter suggests a component of a potential future use (environmental demonstration project and educational base) and a standard that the commenter believes is necessary to achieve that use (highest level of environmental protection). Army does not consider a potential future use or the property's value for such future use to be a component of the baseline condition of the current environment affected by the proposed action.
48	CFMNP	3/-/R2 - bullet 2	Socio-economics	Restate baseline conditions, recognizing the Hampton Roads region's relatively impoverished situation compared to many other major waterfront metropolitan areas (e.g. San Francisco, Washington, Boston, New York) in terms of public waterfront land.	Combining statistics from the Trust for Public Land Study and U.S. census data, the FEIS concludes that the five-city Hampton Roads study area has more total and per capita miles of public shoreline than Boston, New York, or the three-city San Francisco metropolitan area. The limited public waterfront potential of the Hampton and Norfolk areas was added to the Aesthetics and Visual Resources cumulative effects section.
49	CFMNP	3/-/R! - bullet 3	Wherry Quarter Reuse	Restate baseline conditions, recognizing Wherry Quarter's current situation, with a clutter of undistinguished cheaply constructed buildings, as "temporary" in nature, and thus evaluate environmental impact of any new development here in comparison to a largely unoccupied terrain on the northeast rampart of the stone fort.	There is no basis for concluding Wherry Housing units are either thrown-up or temporary in nature. These are in fact historically significant structures subject to the nation-wide "Program Comment for Capehart and Wherry Era Army Family Housing and Associated Structures and Landscape Features (1949-62)," approved by the ACHP in 2002. The intent is to refurbish and continue using these structures as residential housing. The remaining substantial, brick-clad structures that predominate the Wherry Quarter are also permanent construction.
50	CFMNP	3/-/R1 - bullet 4	Visual & Aesthetics	Restate baseline conditions, recognizing that the compact 570 acres of Fort Monroe, with its absolutely unique combination of significant history over the entire span of the American experience, a concentration of intact magnificent architecture including the largest moated fort ever built in North America, a landscape of incredible beauty and interest, and varied and valuable natural resources all within walking distance of each other, is one of the most precious sites in Eastern North America to the human experience.	The EIS baseline recognizes the history of Fort Monroe and its recognition as a National historic Landmark, devoting twelve pages to its description in Section 4.9 alone. Additionally, Army has entered into an award-winning Programmatic Agreement (Advisory Council on Historic Preservation's Chairman's Award for Federal Achievement in Historic Preservation) with the State Historic Preservation Officer, FMFADA, Commonwealth, ACHP, and NPS designed to protect Fort Monroe's cultural resources and to promote their interpretation. There is no need to restate or expand upon the description of the current baseline conditions.
51	CFMNP	3/-/R2	General	Rework projected environmental impacts in light of this adjusted recognition of the environmental value of the property, particularly in terms of land use, aesthetic/visual resources, cultural resources and cumulative effects, including by engaging in far more detailed evaluation of impacts of possible development in area northeast of moated stone fort. The cumulative impacts upon surrounding communities, i.e., Buckroe and Phoebus, from the alternative schemes for Fort Monroe should be more closely evaluated as well. It is also important to consider the Anny's viewshed and cultural landscape studies, now in progress.	The Army believes that the baseline conditions of the affected environment are properly stated and that the EIS properly assesses the potential impacts upon the affected environment. However, where appropriate the Army has revised the final EIS in response to more specific comments. Additional analysis was performed and text was added to the EIS regarding the potential effects upon the landscapes and green linkages between historic areas and open space, including in the Wherry Quarter, as well as to identify potential mitigations for adverse effects.

No.	Source	Page/Para/Line	Subject	Comment	Response
52	CFMNP	3/-/R3	National Park Alternative	Add evaluation of a fourth reuse alternative, a national park unit in partnership with the Commonwealth at Fort Monroe. The existence of such a unit would provide financial and other resources to the property that would potentially allow a higher level of environmental stewardship and lower dependence upon revenue-producing new development, and thus more beneficial environmental effects than any of three brackets currently evaluated. A national park unit on the Chesapeake Bay, directly connected to other sites by Captain John Smith Chesapeake National Historic Trail, would likely have a significant positive benefit over time for public appreciation, awareness and enjoyment of the Bay, and therefore for its health and economic utility.	A separate National Park alternative is not considered a reasonable alternative for the disposal of Fort Monroe property. Additional discussion is added to the EIS describing the assumption that historical resources will be managed by a "uniformed" agency in accordance with the PA and NPS guidelines. The impact analysis determined that the type of management agency, whether it be federal, state, or local, will not result in significantly different comparative impacts on the resources as long as the same management standards are followed.
53	CFMNP	4/-/R2	Mitigation	Develop additional mitigating measures to protect landscapes and green linkages between historic area and 196 acres designated as open space (especially in Wherry Quarter), to protect lands fronting upon and viewsheds to and from Chesapeake Bay and to and from northeast rampart of stone fort, and to protect lands fronting upon and viewsheds to and from Mill Creek.	Additional analysis was performed and text was added to the final EIS identifying potential mitigations for adverse effects upon the landscapes and green linkages between historic areas, open space, and viewsheds.
54	CFMNP	4/-/R%	Mitigation, National Park Alternative, and other items.	Require Army to obtain commitment from Commonwealth and FMFADA that Supplemental EIS will be performed when and if (i) any development plan (other than current interim use plan) is formulated for Wherry Quarter; (ii) when the current reuse plan is significantly altered in any manner that could cause significant environmental impacts; or (iii) the programmatic agreement is terminated (or significantly amended in any manner that could cause significant environmental impacts).	It is beyond the legal authority of the Army to require the requested supplementation. NEPA does not extend to actions implemented by states, local governments, or private individuals.
55	Chesapeake Bay Foundation, Bay Care Chapter	1/2/all	National Park Alternative	We point out the lack of DEIS emphasis for a self sustaining national park unit at Fort Monroe. This is disappointing considering the large number of comments that were concerned with the establishment of a national park unit.	A separate National Park alternative is not considered a reasonable alternative for the disposal of Fort Monroe property. Additional discussion is added to the EIS describing the assumption that historical resources will be managed by a "uniformed" agency in accordance with the PA and NPS guidelines. The environmental impact analysis determined that the type of management agency, whether it be federal, state, or local, will not result in significantly different comparative impacts on the resources as long as the same management standards are followed.
56	Chesapeake Bay Foundation, Bay Care Chapter	2/1/-	Wherry Quarter Reuse	The DEIS does not emphasize the value of the open space in the Wherry Quarter and does not include the results of the viewshed analysis.	Additional analysis was performed and text was added to the final EIS regarding the potential effects upon the landscapes and green linkages between historic areas and open space, including in the Wherry Quarter, as well as to identify potential mitigations for adverse effects.
57	Chesapeake Bay Foundation, Bay Care Chapter	2/2/-	Cumulative Impacts	A more in depth look at the cumulative impacts of development at Ft. Monroe should have been included.	The cumulative effects resulting from the reuse are properly evaluated by the EIS.
58	Chesapeake Bay Foundation, Bay Care Chapter	2/3/-	Water Resources	The recent Executive Order of May 12, 2009 concerning the Chesapeake Bay should have been included and commented on in depth as it applies to federal lands that could impact the bay.	E.O. 13508 is now included in 1.4.2 Relevant Statutes and Executive Orders, and the text (4.7.1.1) has been appended.

No.	Source	Page/Para/Line	Subject	Comment	Response
59	Chesapeake Bay Foundation, Bay Care Chapter	2/4/-	Global Warming/Sea Level Rise	The economic and physical impact of sea level rise in Hampton roads in the coming century will definitely affect Fort Monroe.	A study of potential strategies for mitigating the effect of sea level rise and hurricanes is added to the list of identified potential mitigations in the final EIS.
60	Tom Leary	Public Meeting Comment Sheet	HazToxSubs/ UXO	Has a Marine Impact Study been done on the moated area and also in the Hampton Roads area around Fort Monroe? The Fort was a FFP (fixed firing point) since the 1800s. It is very important that this study be made public to help citizens feel safe where munitions are concerned.	A Remedial Investigation and Risk Assessment is currently being performed for the moat. An investigation of the near-shore areas that may be associated with usage of Fort Monroe beaches has been completed, and no munitions were discovered. The presence, nature, and location of any munitions in the farther reaches of Chesapeake Bay are not relevant to and will not affect or be affected by Fort Monroe's reuse, and therefore are outside of the scope of this EIS.
61	Louis Guy	Public Meeting Comment Sheet	Availability	Please deliver copies of the DEIS to Norfolk Public Libraries (Central, Ocean View, and Larchmont) and to Portsmouth Main Library.	These deliveries were made.
62	Carole Garrison	Public Meeting Comment Sheet	HazToxSubs/ UXO	A *(UXO)* study is underway but not completed. My concern is the study will come in so late that citizens input will be irrelevant. When this study comes out, will citizens have time to review and question finding*(s)* of this report?	The results of this study are following a different track from the NEPA EIS and will not be reported through the EIS. The Restoration Advisory Board (RAB) is the venue whereby citizens have the opportunity for input into the munitions cleanup process. The RAB has been meeting on a quarterly basis since 2006 and will continue to do so through at least 2011. The dates/times and agendas for RAB meetings are advertised in local papers; the meetings are open to the public.
73	Public Comments (132 received)	Email	Freedmen's Cemetery (2 comments)	I would like for the Army to include a report in their DEIS, informing the public, on the progress made for Identifying the Slaves' burial grounds at Fort Monroe	The Freedmen's Cemetery Study is intended as a mitigation to be used by the FMFADA and/or Commonwealth during the reuse of Fort Monroe, as opposed to a source of information necessary to the EIS. This study is not yet completed and so cannot be included in the EIS.
74	Public Comments (132 received)	Email	Historical Significance (2 comments)	the Army has not considered Fort Monroe's immense historical importance, but has treated it as it would the average military installation.	The EIS baseline recognizes the history of Fort Monroe and its recognition as a National Historic Landmark, devoting twelve pages to its description in Section 4.9 alone. Additionally, Army has entered into an award-winning Programmatic Agreement (Advisory Council on Historic Preservation's (ACHP) Chairman's Award for Federal Achievement in Historic Preservation) with the State Historic Preservation Officer, FMFADA, Commonwealth, ACHP, and National Park Service designed to protect Fort Monroe's cultural resources and to promote their interpretation. There is no need to restate or expand upon the description of the current baseline conditions.
75	Public Comments (132 received)	Email	Involve National Park Service as Owner or Manager of Fort Monroe (126 comments)	The Army needs to conduct a thorough investigation of a wide range of alternatives, including possibilities for substantial National Park Service involvement in a self-sustaining Fort Monroe National Park.	A separate National Park alternative is not considered a reasonable alternative for the disposal of Fort Monroe property. Additional discussion is added to the EIS describing the assumption that historical resources will be managed by a "uniformed" agency in accordance with the PA and NPS guidelines. The impact analysis determined that the type of management agency, whether it be federal, state, or local, will not result in significantly different comparative impacts on the resources as long as the same management standards are followed.

No.	Source	Page/Para/Line	Subject	Comment	Response
76	Public Comments (132 received)	Email	Parcelization of Fort Monroe (2 comments)	The Army needs to recognize that Fort Monroe should not be divided up, with portions offered for unnecessary development.	Following transfer, the Programmatic Agreement commits the Commonwealth and the FMA to control the use of the property at Fort Monroe, regardless of ownership. Non-reversionary property transferred out of federal ownership will be transferred with protective covenants and use restrictions designed to protect cultural resources and human health and the environment. Army cannot prevent the subsequent transfer of property owned by the state or private individuals.
77	Public Comments (132 received)	Email	Wherry Quarter Baseline and Reuse (126 comments)	the Army should rework the DEIS so that it properly assesses and classifies Wherry Quarter baseline conditions, and properly evaluates Wherry Quarter reuse impacts.	The Wherry Quarter discussions in the EIS have been revised.
78	Public Comments (132 received)	Email	Protection of the Chesapeake Bay (5 comments)	Recognize that the Army like all entities and States bordering the Chesapeake Bay has a responsibility to keep the Bay as protected as possible from pollutants that would be generated from massive private over-development of Fort Monroe's major amount of shoreline, all of which falls within the Bay's watershed	The Army has for many years fully recognized its environmental responsibilities on all its installations. Army is not aware of any plans for massive private overdevelopment of Fort Monroe's shoreline. The EIS does not evaluate any such plan because it would bear no resemblance to the Reuse Plan.
79	Public Comments (132 received)	Email	Ecological Studies (1 comment)	Given the environmentally sensitive location of the property, we would like a full blown ecological study of direct and indirect impacts to the flora and fauna as well.	Many ecological studies, surveys, and information gathering activities have been conducted over the many years that Fort Monroe has implemented its Integrated Natural Resource Management Plan. There is no information uncovered by the EIS indicating a need for a comprehensive ecological study. Also, during the Scoping phase of the EIS, which assists the Army in determining what issues need to be addressed, there was no request for such a study.
80	Public Comments (132 received)	Email	Public Access (1 comment)	I fear a defacto "off limits" to the public via a closed "gates only" high end residential housing area would be the elimination of this beautiful area that so many love and want to share from the hearts, minds and history of our state and our country.	The comment is a specific concern regarding the future use of Fort Monroe, as opposed to being a comment on the EIS. Nonetheless, it is stated in the Executive Summary, the main document text, and in the FMFADA Reuse Plan, that Fort Monroe will be open for public access and enjoyment.
81	Public Comments (132 received)	Email	Natural Resources (2 comments)	The EIS should include a statement about how removing the bunkers or changing the seawall will affect the beach, the birds, and the native (albeit sparse) grass on the post.	Text was added (4.8.2.5) to say that any removal or alteration of the batteries, bunkers, seawall or breakwaters has the potential to adversely affect the beach profile, the beach fauna, and the native grasses along the Chesapeake Bay shoreline from the Wherry Quarter to the northern limit of the installation.
82	Chespeake Bay Foundation	1/2/-	National Park Alternative	CBF believes the DEIS underestimates the potential of a significant national park unit operating in partnership with the Commonwealth at Fort Monroe. This is a realistic alternative and is very likely to have favorable environmental consequences for any areas that would be included within the borders of any National Park on the property.	A separate National Park alternative was not considered a reasonable alternative for the disposal of Fort Monroe property. Additional discussion has been added to the EIS describing the assumption that historical resources will be managed by a "uniformed" agency in accordance with the PA and NPS guidelines. The impact analysis determined that the type of management agency, whether it be federal, state, or local, will not result in significantly different comparative impacts on the resources as long as the same management standards are followed.
83	Chespeake Bay Foundation	1/3/-	Water Quality	The DEIS states that surface water quality around Fort Monroe is listed as impaired and does not meet water quality standards (DEIS, 4-59). Therefore, CBF believes that proposed development efforts on Fort Monroe should consider impacts on the water quality in waterways surrounding the site.	Additional information has been added to Section 4.7 to clarify and differentiate between impairments existing immediately adjacent to Fort Monroe and those in the vicinity of but more distant from Fort Monroe, such as the James river above I-64.

No.	Source	Page/Para/Line	Subject	Comment	Response
84	Chespeake Bay Foundation	1/4/-	Water Quality	CBF suggests that the DEIS should address building from the “Clean Marina” status already approved for the Old Point Comfort Marina and recommends establishment of a “no discharge zone” for Mill Creek and the portion of the Chesapeake Bay located between the marina and the Hampton Roads Bridge Tunnel. “No discharge zones” offer an important educational tool and help to directly address the Bay’s most significant pollution problem – excess nutrients – by requiring boaters to dispose of their waste through pump-out facilities. CBF believes this action would offset many of the issues associated with the proposed increase in size of the marina by as much as 30 percent (DEIS, 4-62).	The current Clean Marina status of the Old Point Comfort Marina is added to the description of the affected environment. The Old Point Comfort Marina's continued participation in the Virginia Clean Marina Program is identified in the final EIS as a potential mitigation for surface water quality effects. Army believes there is a high probability that this mitigation will be implemented because the marina already participates in this program along with 64 other marinas on the Chesapeake Bay and its tributaries. Although the designation of No Discharge Zones in Virginia is limited to five locations at this time (Smith Mountain Lake, Lynnhaven River, Broad Creek, Jackson Creek, and Fishing Bay, See, 9 VAC 25-71-70), designation of Mill Creek and the water between the marina and the Hampton Bridge Tunnel is also identified in the final EIS as a potential mitigation. Army believes the potential for implementation is uncertain given the requirement for other state and Federal agencies to participate and approve such a designation. This designation would only restrict discharge of treated sewage, which would come from approximately 5% of boats over 22 feet. All discharge of untreated sewage from remaining boats within Chesapeake Bay and within three miles of the coast is already prohibited by federal law.
85	Chespeake Bay Foundation	2/1/-	Water Quality	The DEIS notes the passage of the Chesapeake Bay Preservation Act. A signature requirement of the Act is a buffer to protect water quality from contaminants that become entrained in stormwater as it flows off the land. Although much of this buffer has been fragmented by past activities, we suggest developing a wide riparian buffer, planted with native vegetation, along the shoreline of Mill Creek. Riparian buffers provide valuable wildlife habitat and filter runoff, reducing the flow of excess nutrients to the surrounding waterways.	Developing a wide riparian buffer along the shoreline of Mill Creek is identified as a potential mitigation for surface water quality impacts in the final EIS.
86	Chespeake Bay Foundation	2/2/-	Water Quality	Natural shoreline restoration and riparian buffers can also help to protect property and infrastructure from damage during major storm surges. As the DEIS notes, this protection will be increasingly important as the entire property lies within the 100-year floodplain. In addition to protecting the shoreline from flood events, the DEIS notes that completion of a study by the United States Army Corps of Engineers recommended installation of backflow control devices on stormwater outfalls as a means of controlling flooding within the property. To date it appears the devices have only been installed on 14 of the 45 storm sewers that discharge into surface waters and the moat. Knowing this, we advise that restoration of these outfalls be part of any infrastructure restoration program on the property in order to reduce pollutants that are carried by floodwaters.	These devices are essentially flapper valves installed along the seawall and Mill Creek shoreline that prevent elevated surface water levels outside the seawall (i.e., storm surges) from flooding Fort Monroe. Completion of the installation of these flood control devices is identified in the final EIS as potential mitigations for both flooding and surface water quality impacts.

No.	Source	Page/Para/Line	Subject	Comment	Response
87	Chespeake Bay Foundation	2/3/-	Stormwater Runoff	The DEIS mentions that impervious cover will increase from 24 percent to 28 percent under the proposed development scenarios (4-56). CBF recommends that the DEIS address the use of innovative stormwater control techniques that will allow the amount of impervious cover proposed to be reduced. Infiltration should be maximized to capture any pollutants using control measures, often referred to as "environmental site design" or "low impact development." These practices promote the slowing down, spreading out, and infiltration of stormwater instead of having it quickly conveyed to collection systems that deposit the water untreated in the nearest surface water body. A few practices to consider in the DEIS include: 1) using permeable pavement and pavers; 2) utilizing green roofs; 3) preserving vegetation, buffers, and open space; 4) maintaining grass channels and swales; 5) constructing rain gardens; 6) creating bioretention areas; and 7) disconnecting or redirecting downspouts that empty over pavement and directing the runoff to vegetative areas.	The stormwater control techniques presented in the comment are identified as potential mitigations in the final EIS.
88	Chespeake Bay Foundation	2/4/-	Open Space	The DEIS states that, "up to 100 acres may ultimately be disturbed from redevelopment, spread over the course of 20 years. Of this acreage, only a quarter is open green space which would be lost to development." Although this impact appears minimal, CBF feels that redevelopment should focus on the restoration of green and open space on the property.	While areas of green space may be lost to redevelopment, this does not preclude open spaces outside of redeveloped areas from being restored.
89	Chespeake Bay Foundation	2/5/-	Northern Access Road	To ensure the protection of Fort Monroe's natural setting, CBF recommends against the construction of a new roadway connecting the north end of the property with the Buckroe Beach area (DEIS, 4-40 which refers to Fort Monroe Reuse Plan, page 7.4). The proposed use of the north end of the property as a natural area and a site for marsh and other restoration activities would be incompatible with the presence of a through road, and the location of the proposed road would greatly impact important onsite wetland habitat resources. There will be adverse environmental impacts, especially to the marsh and dunes, from the construction and presence of the northern connector road. The north end of the property will be, de facto and by design, the most attractive area to wildlife on the property. Of particular concern is the impact of traffic on nesting birds and turtles, and migrant birds and Monarch butterflies.	The impacts resulting from the construction of the northern connector are analyzed in this EIS because it is an affirmative component of the Reuse Plan. (See comments by the FMFADA and the Hampton City Manager.) Although the commenter recommends against constructing the connector road, the purpose of this EIS is to assess the potential impacts of that action and to identify potential mitigations for adverse effects, which Army believes the EIS does to the extent possible at this stage of development. It is likely that both state and federal environmental permits will be required and that there will be additional and more specific environmental analyses performed based upon more complete plans, as well as an additional opportunity for public comment as part of that permitting process. The EIS offers no opinion on the advisability of the roadway, as that would intrude upon local government decision-making.
90	Chespeake Bay Foundation	3/1/-	Native/Non-native Vegetation	The DEIS indicates that native habitats on Fort Monroe included maritime forests with an abundance of other salt tolerant herbaceous and woody plants. The DEIS further states that much of this original habitat has been disturbed by various activities on the property. This has resulted in the introduction of 22 invasive or undesirable species cataloged on the property (DEIS, 4-68). An aggressive invasive species, *Phragmites australis* is located along the northern shoreline of the fringe marsh. Control of this problematic invasive will allow beneficial native marsh vegetation such as *Spartina alterniflora* and *Juncus roemerianus* to thrive, providing improved wildlife habitat.	The Reuse Plan contemplates the removal of invasive plant species, and the development of a natural resources management plan similar to Fort Monroe's current INRMP is identified in Section 4.15.4 of the final EIS as a potential mitigation measure. The specifics of this plan would be developed by the responsible components of the FMA and/or Commonwealth.

No.	Source	Page/Para/Line	Subject	Comment	Response
91	Chespeake Bay Foundation	3/2/-	Native/Non-native Vegetation	Much of the upland riparian buffer area is significantly impacted with invasive species as well. Shrubby growth of Amur Honeysuckle, *Lonicera maackii* , dominates much of the upland buffer along the creek. The DEIS should call for the development of a comprehensive plan to remove non-native vegetation and restore native habitats as part of the overall reuse plan for Fort Monroe. An example of this plan could include the removal of non-native honeysuckle vegetation and replacement with native plants appropriate to the habitat. Native plants such as American Beach Plum have already been established in the dune area and similar efforts should be expanded. Additionally, native beach grass restoration on the bayside of Fort Monroe could also help to reduce further dune erosion.	The Reuse Plan contemplates the removal of invasive plant species, and the development of a natural resources management plan similar to Fort Monroe's current INRMP is identified in Section 4.15.4 of the final EIS as a potential mitigation measure. The specifics of this plan would be developed by the responsible components of the FMA and/or Commonwealth.
92	Chespeake Bay Foundation	3/3/-	Native/Non-native Vegetation	Current landscaping guidelines at Fort Monroe specify the use of native vegetation. This practice benefits a number of species and greatly enhances populations of native pollinators, like honey bees and butterflies. The continued use of native vegetation should be specified in future landscaping standards for Fort Monroe. Gardens that illustrate good conservation landscaping practices can be established at the visitor center(s), as well as the grounds of other existing buildings throughout Fort Monroe. New gardens can be planned as habitat demonstration areas that illustrate how native plants can be used in more traditional landscape settings.	Development of a natural resources management plan similar to Fort Monroe's current INRMP is identified in Section 4.15.4 of the final EIS as a potential mitigation measure. The specifics of this plan would be developed by the responsible components of the FMFADA and/or Commonwealth, but it could include landscaping practices.
93	Chespeake Bay Foundation	3/4/-	Native/Non-native Vegetation	As described in DEIS, 4.8.1.1, historical habitats on the property consisted as a mixture of maritime forests, woody, and herbaceous vegetation. Open areas maintained by regular mowing exist in the Park & Recreation (PR) area of Fort Monroe. Many native plant species have been observed in the mowed areas, but the heavy mowing severely inhibits their growth. While much of this space is necessary to support recreation activities, simply not mowing designated areas would allow native plants to quickly restore themselves to their natural range in many areas of the Fort. The resulting warm season grass/wildflower meadows would be aesthetically pleasing and support pollinators such as butterflies and grassland species such as bluebirds and tree swallows. This habitat can be further enhanced through the placement of bird and bat nesting boxes. Areas that will remain in turf management could also benefit from the creation of hedgerows consisting of native shrubs such as Eastern red cedar and myrtle. These would provide windbreaks and shelter for wildlife as well as important fall and winter food sources.	Development of a natural resources management plan similar to Fort Monroe's current INRMP is identified in Section 4.15.4 of the final EIS as a potential mitigation measure. The specifics of this plan would be developed by the responsible components of the FMA and/or Commonwealth, but it could include landscaping practices.
98	Chespeake Bay Foundation	5/2/-	Habitat Restoration	Fort Monroe is, from an environmental perspective, a heavily impacted site. Given this, it is important that the surviving environmental resources be carefully managed and protected.	Development of a natural resources management plan similar to Fort Monroe's current INRMP has been identified in Section 4.15.4 of the final EIS as a potential mitigation measure.

No.	Source	Page/Para/Line	Subject	Comment	Response
99	Chespeake Bay Foundation	5/3/-	Habitat Restoration	The DEIS should have clearly acknowledged that first and foremost among environmental priorities is the preservation and restoration of the northern portion and its adjacent marshes as a natural area. This area contains much of the marsh, all of the dunes, and the only surviving fragment of maritime forest on the property. It is the only large tract on the property that remains in anything approaching a natural state. Preservation of this area must preclude any new construction aside from carefully planned trails (possibly including a small marsh viewing platform) and any work necessary for restoration and/or preservation of key environmental features. This work may include, for example, removal of a recently installed series of streetlights.	The purpose of the EIS is to evaluate the environmental impacts of the reuse alternatives, and to identify potential mitigations for those impacts. The EIS does not establish environmental priorities. Nonetheless, the Reuse Plan itself reserves the northern section of the Fort Monroe property for wildlife and recreation, including the establishment of trails and a nature center, and the final EIS identifies the development of a natural resources management plan similar to Fort Monroe's current INRMP as a potential mitigation measure. That plan may include those elements described in the comment.
100	Chespeake Bay Foundation	5/4/-	Habitat Restoration	The DEIS should have recognized that another environmental priority is the protection of marshes in other parts of Mill Creek. Any educational or recreational resources that use the marshes must, first and foremost, not harm the marshes. There are relatively few mature trees on the property and these should be protected during construction and renovation of buildings. Live Oaks represent a species of special interest to the Fort and should be considered untouchable during any renovation or new construction.	The purpose of the EIS is to evaluate the environmental impacts of the reuse alternatives, and to identify potential mitigations for those impacts. The EIS provides information relevant to but does not establish environmental priorities. Nonetheless, the Reuse Plan itself reserves the northern section of the Fort Monroe property for wildlife and recreation, and the final EIS identifies the development of a natural resources management plan similar to Fort Monroe's current INRMP as a potential mitigation measure. That plan may include those elements described in the comment.
101	Chespeake Bay Foundation	5/5/-	Habitat Restoration	Furthermore, the DEIS should have explored constructing a living shorelines project along Mill Creek in the area located near the north end of the property. Living shorelines not only protect the marsh shoreline from erosion, but also provide a wealth of wildlife habitat. As part of a living shoreline, we also suggest building an intertidal, sanctuary oyster reef just off shore in Mill Creek. An oyster reef project at this site could be highly visible to visitors from the nearby bird observation platform and a welcome opportunity for environmental education.	The final EIS identifies the development of a natural resources management plan similar to Fort Monroe's current INRMP as a potential mitigation measure. That plan may include development of a living shoreline and an oyster reef.
102	Chespeake Bay Foundation	5/6/-	Habitat Restoration	Also along the shoreline of Mill Creek is a great deal of shoreline hardening, or concrete "caps" and various piles of concrete debris. In many places, this concrete capped shoreline is showing signs of wear, undercutting, and erosion, which will eventually lead to its failure. We suggest that the concrete portions be removed and a natural or living shoreline be restored along this stretch. A living shoreline offers a more sustainable approach to preventing erosion, and this stretch in particular may be ideally suited for a low-marsh-toe sill with a living shoreline constructed landward.	The final EIS identifies the development of a natural resources management plan similar to Fort Monroe's current INRMP as a potential mitigation measure. That plan may include a living shoreline along Mill Creek.
103	Chespeake Bay Foundation	6/1/-	Executive Orders	As you are well aware, on May 12, 2009, President Barack Obama signed an Executive Order (EO) that calls on the federal government to lead the effort to control pollution that flows to the Chesapeake Bay and protect wildlife habitats in the region. As you will note in these opening sentences of the EO, this applies to those federal landholders that can and should direct sustainability practices on the lands that potentially have an impact on the Bay, which applies directly to Fort Monroe given its geography and its close proximity to the Bay:	E.O. 13508 is now included in 1.4.2 Relevant Statutes and Executive Orders, and the text (4.7.1.1) has been appended. Fort Monroe will manage the lands in accordance with the E.O. through 15 September 2011, but on 16 September 2011 the land is no longer under federal control. Therefore, the E.O. would not apply.

No.	Source	Page/Para/Line	Subject	Comment	Response
104	Chespeake Bay Foundation	6/4/-	Executive Orders	Regarding Part Five of the EO, “Reduce Water Pollution from Federal Lands and Facilities,” note the directive to protect management responsibilities of sound land management to areas such as Fort Monroe:	Directive noted. Also, please see response to Comment 103, directly above.
105	Chespeake Bay Foundation	6/6/-	Executive Orders	Note in Part Seven of the EO, “Expand Public Access to the Chesapeake Bay and Conserve Landscapes and Ecosystems,” there is particular interest in existing sites on agency lands and facilities where public access to the Chesapeake Bay or its tributary waters is offered, could be expanded, or where new opportunities could be provided – which are all applicable to and deserve special attention at Fort Monroe, and are referred to numerous times within the Fort Monroe Reuse Plan that is included in the DEIS. Also applicable to Fort Monroe, in that same section, there is interest in landscapes and ecosystems in the Chesapeake Bay watershed that merit recognition for their historical, cultural, ecological, or scientific values and call for options for conserving these landscapes and ecosystems. Finally, note another section of Part Seven, in which the EO calls for areas to be given special consideration if they overlap with the Captain John Smith Chesapeake National Historic Trail, in which Fort Monroe could be well aligned.	The Reuse Plan provides for and the EIS evaluates the impacts of public access to shoreline areas. At this time Army is not aware of an intent to integrate Fort Monroe into the Captain John Smith Chesapeake National Historic Trail. Army does not believe that such an integration would result in any discernable change in the environmental impacts, as it would not result in a significant change in the number of users or the nature of use.
106	Chespeake Bay Foundation	7/1/-	Executive Orders	President Obama’s May 2009 EO draws timely and pertinent correlations with Fort Monroe, and calls for a high standard to be demonstrated by the Federal Government in the optimal protection and utilization for sites such as Fort Monroe given their ability to affect the restoration efforts of the Chesapeake Bay.	While EO 13508 is not applicable to state and private individuals, the reuse of Fort Monroe will be in accordance with state and federal environmental protection laws and regulations. That is the assumption upon which the EIS evaluates the potential environmental impacts resulting from Fort Monroe's reuse.
107	USDI	1/2/-	Project Description	The Department believes that the closure of Fort Monroe under BRAC has the potential for adverse effects on the Fort Monroe National Historic Landmark (NHL) Historic District. The DEIS only applies to the land that does not revert to the Commonwealth. Figure 2.2-1 on page 2-6 shows the reversionary and non-reversionary land. The bulk of the contributing resources to the NHL Historic District will revert to the Commonwealth and will be managed by the Fort Monroe Federal Area Development Authority (FADA). The remainder of the Fort will be disposed of through BRAC disposal techniques. These areas are Management Zone 3, North Gate, and the western edge of Management Zone 4, Historic Village. Transfer of fee-simple interest in property with Historic Buildings and Structures or with Archeological Sites will include appropriate covenants that will provide adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance. It would be desirable for the non-reversionary land to also be transferred to the Fort Monroe FADA, so that the entire NHL Historic District would be under single ownership and management.	Although the proposed federal action is to close the installation and dispose of federal fee-owned property, the evaluation of effects applies to the reuse of the entire installation. The second paragraph of the Executive Summary states that the " ... EIS also considers the cumulative impacts of potential reuses of the large portion of the property that will revert to the Commonwealth of Virginia according to deed provisions established when the Army was granted ownership of the property." Between the reversionary and non-reversionary property, the environmental impacts from the reuse of the entire installation are evaluated. The NHL will continue to be protected by those mechanisms detailed in the comment, regardless of the future ownership of the property. While the Army and the Commonwealth have had preliminary discussion on the sale of the non-reverting property to the Commonwealth, there is no agreement at this time and all BRAC disposal options remain available.
109	USDI	2/1/-	Early Transfer Alternative	The Early Transfer Option outlined in the DEIS is undesirable because all environmental remediation should be completed before land and buildings are transferred to new owners.	In accordance with Army guidelines for implementing NEPA, Early Transfer is an option that is considered and analyzed in all Army BRAC actions where environmental cleanup remains to be performed. Early transfer must be approved by the governor based on a determination that the proposed Early Transfer meets certain guidelines established under CERCLA 120(h)(3). Transfer of reversionary property will occur upon and in accordance with the conditions for reversion as established in the deed.

No.	Source	Page/Para/Line	Subject	Comment	Response
110	USDI	2/2/-	Northern Access Road	Construction of a road at the north end of the peninsula to connect to the Buckroe Beach neighborhood of Hampton, Virginia, is undesirable as it would be inconsistent with the proposed use of the north end of the property as a natural area and a site for marsh and other restoration.	The impacts resulting from the construction of the northern connector are analyzed in this EIS because it is an affirmative component of the Reuse Plan. (See comments by the FMFADA and the Hampton City Manager.) Although the commenter recommends against constructing the connector road, the purpose of this EIS is to assess the potential impacts of that action and to identify potential mitigations for adverse effects, which Army believes the EIS does to the extent possible at this stage of development. It is likely that both state and federal environmental permits will be required and that there will be additional and more specific environmental analyses performed based upon more complete plans, as well as an additional opportunity for public comment as part of that permitting process. The EIS offers no opinion on the advisability of the roadway, as that would intrude upon local government decision-making.
111	USDI	2/3/-	Programmatic Agreement	Table 4.9-2, Invited Signatories and Concurring Parties for the Programmatic Agreement (PA), incorrectly shows the National Park Service (NPS) as a concurring party. The National Park service (NPS) is an invited signatory and NPS Northeast Regional Director Dennis R. Reidenbach signed the PA on March 16, 2009. Your point of contact in the NPS for further coordination concerning this matter is Lloyd Chapman, telephone 215-597-2334.	Table 4.9-2 has been changed to correctly the NPS as an invited signatory.
112	VaDEQ/WWP	2/4/-	HTRW	In accordance with the Fort Monroe Reuse Plan dated August 20, 2008, known and potential concerns include munitions releases and disposal, hazardous substance releases and solid waste disposal, petroleum hydrocarbon releases, and asbestos, lead-based paint, and other hazardous materials in buildings. Areas of known and potential concern must be adequately investigated so that environmental cleanup decisions can be determined. Consequently, the results of any water quality sampling need to be submitted and evaluated to determine whether the conclusion that the above listed contaminants do not warrant further treatment.	The comments and requests generally address issues falling outside of the scope of the EIS and are being coordinated with VDEQ.
113	VaDEQ/WWP	2/5/-	Wetlands	Since the Army is uncertain of the exact type of activities that may occur with the disposal and reuse of Fort Monroe, DEQ is unable to determine the potential impacts to wetlands, if any. If State waters, including wetlands, are proposed to be impacted the project activities, a Virginia Waters Protection (VWP) permit may be required, and the project proponent should coordinate with the DEQ Tidewater Regional Office for final permit determination. Compensation for unavoidable impacts may also be required.	The environmental impacts analyses assume that all reuse will occur in accordance with applicable state and federal laws.

No.	Source	Page/Para/Line	Subject	Comment	Response
114	VaDEQ/WWP	2/6/-	Wetlands	If any activities, including construction, indirectly or directly impact surface waters (including wetlands) then a wetland delineation should be conducted to determine the location, extent, and type of surface waters present. Coordination of this project should be conducted with the Virginia Marine Resources Commission, the Army Corps of Engineers and the Department of Environmental Quality (DEQ) through the Joint Permit Application (JPA) process. The JPA must include documentation of all avoidance and minimization efforts and a conceptual plan for appropriate compensatory mitigation. Avoidance and minimization of wetland impacts should occur to the maximum extent practicable. Please continue close coordination with DEQ regarding mitigation options as they are considered and developed. Please note that if portions of the project fall under CERCLA, then those portions do not require a VWP permit. However, federal facilities are encouraged to complete a JPA to make certain that all of the appropriate substantive parts of the VWP regulation have been addressed. If portions of the project fall under RCRA, then a VWP permit may be required for potential impacts to surface waters, including wetlands.	The environmental impacts analyses assume that all reuse will occur in accordance with applicable state and federal laws.
115	VaDEQ/WWP	3/1/-	Wetlands	Unavoidable impacts to all wetlands greater than 1/10 acre or to streams in excess of three hundred linear feet will require compensation through the purchase of mitigation bank credits or through the creation, enhancement or preservation of wetlands or streams within the project's watershed. Any temporary impact should be restored to their original contours and revegetated with the same or similar species.	The environmental impacts analyses assume that all reuse will occur in accordance with applicable state and federal laws.
116	VaDEQ/WWP	3/2/-	Wetlands	If necessary, consider using a work bridge rather than a causeway to reduce temporary impacts.	Army presumes that since VDEQ offers this comment in the context of avoiding temporary impacts to the wetlands, that it is requesting that a temporary work bridge built upon pilings (as opposed to a temporary earthen causeway) be used to support construction of the adjacent permanent bridge. The final EIS identifies the use of a temporary work bridge as a potential mitigation for adverse short-term impacts that may result from construction of a north connector road bridge.
117	VaDEQ/WWP	3/3/-	Threatened & Endangered Species	Since state and federal threatened and endangered species have been identified in the near proximity of the project, we suggest continued coordination with the Department of Game and Inland Fisheries as well as the Department of Conservation and Recreation and/or the U.S. Fish and Wildlife Service regarding presence of endangered or threatened species and/or habitat, prior to seeking a permit from the DEQ.	The environmental impacts analyses assume that all reuse will occur in accordance with applicable state and federal laws. Early initiation of wetlands consultation has been added as an identified potential mitigation in the final EIS. Early initiation of these activities will assist in minimizing wetlands impact by the selection of a proper road alignment and design and construction methodologies.
118	VaDEQ/WWP	3/4/-	Permits	Please coordinate appropriately for any permits associated with the Virginia Pollutant Discharge Elimination System (VPDES) process for any potential discharges.	The environmental impacts analyses assume that all reuse will occur in accordance with applicable state and federal laws.
119	VaDEQ/WWP	3/5/-	BMPs	In addition to water quality concerns, we recommend strict adherence to erosion and stormwater management practices, and further encourage the project proponent to monitor any construction activities to make certain that erosion and stormwater management practices are adequately preventing sediment and pollutant migration into surface waters, including wetlands.	The environmental impacts analyses assume that all reuse will occur in accordance with applicable state and federal laws.

APPENDIX B **FORT MONROE REUSE PLAN**

This page intentionally left blank.

FORT MONROE REUSE PLAN

August 20, 2008

The Fort Monroe Reuse Plan was created by the
Fort Monroe Federal Area Development Authority:

BOARD MEMBERS
**denotes Executive Committee*

Governor's Cabinet Appointees
The Honorable Viola O. Baskerville, *Secretary of Administration*
The Honorable L. Preston Bryant, Jr., *Secretary of Natural Resources, Chairman**
The Honorable Robert P. Crouch, *Assistant to the Governor for Commonwealth Preparedness*
The Honorable Patrick O. Gottschalk, *Secretary of Commerce and Trade*
The Honorable Jody M. Wagner, *Secretary of Finance*

General Assembly Appointees
The Honorable John Miller, *Senate District 1*
The Honorable Mamie Locke, *Senate District 2, Secretary / Treasurer**
The Honorable Tom Gear, *House District 91*
The Honorable Phil Hamilton, *House District 93**

Citizen Appointees *(Hampton City Council)*
Dr. Alvin Bryant
Mr. Robert Harper
Dr. Kanata Jackson
Dr. Wayne Lett
Mr. John Quarstein
Mr. Robert A. Scott
Mr. Tommy T. Thompson, *Vice Chairman**

Governor Appointees *(Professional Experts)*
Dr. Rex M. Ellis
Ms. Catharine Gilliam*

EXECUTIVE DIRECTOR
William A. Armbruster

HISTORIC PRESERVATION ADVISORY GROUP
Kathleen S. Kilpatrick, *Director, Department of Historic Resources*
Robert Nieweg, *Director, Southern Field Office, National Trust for Historic Preservation*
Mary Means, *Principal, Mary Means and Associates*
Eleanor Krause, *Principal, RKTects*
Dr. Laurenett Lee, *Curator, African American History, Virginia Historical Society*
Jeanne Zeidler, *Director, Jamestown 2007*
John Munick, *former CEO, Drucker and Falk Realtors*
Alisa Bailey, *President, Virginia Tourism Corporation*
Dorothy Redford, *Executive Director, Somerset Plantation State Historic Site, NC*

CONSULTANTS
Bay Area Economics, *Market Analysis*
Dutton + Associates, *Historic Preservation*
Dover, Kohl & Partners, *Town Planning*
Economics Research Associates, *Tourism Analysis*
David Knisely, Garrity-Knisely Attorneys, *BRAC Law*
Hanbury Evans Wright Vlattas + Company, *Architecture & Preservation*
Conover Hunt, *Planning & Coordination*
H. Blount Hunter Retail & Real Estate Research, *Market Analysis*
Kimley-Horn & Associates, *Engineering and Transportation*
Matrix Design Group, Inc., *Environmental Analysis & Engineering*
Trudy O'Reilly, *Public Relations Advisor*
Zimmerman/Volk Associates, *Housing Analysis*

The 2008 Reuse Plan is based on the significant planning performed by the Hampton FADA in 2006-2007.

FMFADA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
Planning a future for freedom's legacy

TABLE OF CONTENTS

Introduction 1

Planning Essentials 2

Land Use Concepts and Limits 3

Economic Impact Strategy 4

Tourism Strategy 5

Environmental Considerations 6

Transportation, Infrastructure & Flood Control Strategy 7

ECONOMIC IMPACT STRATEGY

Fort Monroe must be economically self-sustaining. Reuse will need to attract new jobs and resident customers to replace those lost by the BRAC process. Preliminary analysis estimates annual operations and maintenance costs at $3.9 to $4.4 million. Additional funding will be needed to support the operation and maintenance of buildings and land areas designated for public uses, and to support the upgrades needed to bring the existing infrastructure systems up to municipal and state standards. Public responsibility will be reduced by assigning private users with the responsibility for maintaining many of the buildings.

Reuse can generate funding through lease, tax and fee revenue. Future tenants could pay for short-term leases or make up-front payments for long-term leases. This revenue can be utilized for daily operations and maintenance (O&M), required infrastructure and capital improvements, and long-term costs associated with stewardship of historic and environmental assets. Preliminary financial planning suggests that lease revenue could generate $93 million in excess of the cost of running the FMFADA and meeting its O&M responsibilities. Preliminary analysis estimates major capital improvements would cost $40 million. The FMFADA will continue to work with the City of Hampton to develop estimates of operating costs and revenues, including identifying revenue sources to offset and minimize the impact of costs to bring infrastructure and services into the City's systems. Potential partnerships between the Fort Monroe management entity and the City of Hampton will be explored to address short- and mid-term capital improvement and O&M costs.

TOURISM STRATEGY

Conservative estimates indicate that between 225,000 and 275,000 visitors will come to Fort Monroe per year (assuming stabilized yearly operations), with approximately 55% visiting for historical and cultural attractions, and 45% coming for recreation activities.

A resort hotel of 120 to 150 rooms, designed to evoke the scale and character of the former Hygeia Hotel, can potentially be supported as part of the cultural and recreational experience. Camping at the expanded Recreational Vehicle site can provide affordable hospitality. The marina and beach amenities will primarily attract local and regional visitors; historical, cultural and museum facilities can be combined with other regional attractions such as Colonial Williamsburg, Yorktown, and Jamestown to create a *Historical Quadrangle,* extending both length of stay and breadth of historical interpretation. This cooperative partnership could position Fort Monroe on a national and international level.

The development management structure should include both for-profit/private development opportunities through FMFADA as well as establishment of a 501(c)(3) non-profit management entity for the cultural and heritage uses, providing for tax-exempt status and ability to receive charitable/educational grants and other contributions. Capital and operating revenues from the disposition of properties and services can best be optimized with a dual public/private structure.

ENVIRONMENTAL CONSIDERATIONS

The environmental analysis summarizes conditions related to the investigation and cleanup of environmental contamination which have the potential to affect the planned reuse of Fort Monroe. A discussion of the actions currently underway to address known and potential environmental contamination is provided.

Known and potential concerns include munitions releases and disposal, hazardous substance releases and solid waste disposal, petroleum hydrocarbon releases, and asbestos, lead-based paint, and other hazardous materials in buildings. Areas of known and potential concern must be adequately investigated so that environmental cleanup decisions can be made. Environmental cleanup requirements will be based primarily on future land uses shown in the approved Reuse Plan for Fort Monroe. Typically, property used for residential purposes, hospitals and medical care, schools and daycare, and certain types of research generally require the highest level of cleanup. Property used for commercial or retail purposes generally require a moderate level of cleanup, and property used for recreational purposes generally require the lowest (i.e., least stringent) level of cleanup.

TRANSPORTATION & INFRASTRUCTURE

The transportation element of the Reuse Plan has three primary goals: to restructure the Fort Monroe entrance; to provide clear access; and to provide key transportation improvements to support economic vitality and an enhanced quality of life for the Fort and surrounding communities.

Most of the infrastructure on the Fort is reported to be in generally good condition; however, proposed reuse will require some upgrades as well as extensions primarily for water, sewer, and storm drainage infrastructure. Preliminary cost estimates have been developed for infrastructure components that appear to be under capacity or will require extension under the Reuse Plan. In addition to infrastructure needs and costs, flood control must be considered. Many of the historic buildings on the Fort have not been elevated or altered since their construction, making them especially prone to flood damage. In response to the substantial damage sustained during Hurricane Isabel, the U.S. Army Corps of Engineers conducted a Flood Evaluation and Protection Study. From this study a recommended flood protection plan was created; some of the recommended measures are already being implemented, while others may need to be funded as a part of future reuse.

FMFADA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY

Planning a future for freedom's legacy

www.fmfada.com

For more information, please contact:
Fort Monroe Federal Area Development Authority
Old Quarters #1
151 Bernard Road
Fort Monroe, Virginia 23651
757-637-7778

Fort Monroe Reuse Plan

Executive Summary

Fort Monroe is located in Hampton, Virginia on Old Point Comfort where the Hampton Roads Harbor and the Chesapeake Bay meet. Established as a U.S. Army installation in 1819, this 570-acre National Historic Landmark District contains a diverse collection of buildings, structures, and landscapes rich in military and American history. Fort Monroe will be closed as a military facility in 2011, and much of the land will revert to the Commonwealth of Virginia. After the Army leaves the post, every effort will be made to maintain the special qualities of this incredible place.

Fort Monroe was designated a National Historic Landmark (NHL) in 1960. A primary objective for reuse is to avoid jeopardizing the Fort's NHL status. The plan envisions the preservation of the majority of contributing buildings located within the Fort Monroe National Historic Landmark District as well as significant landscapes and viewsheds. More than 170 buildings are proposed to remain and be strategically reused. The plan also describes areas where some new construction is allowed, within strict limits.

The Fort Monroe Reuse Plan includes official policies, land use concepts and limits, and fundamental planning principles as well as strategies related to preservation, economics, tourism, environment, transportation, infrastructure, and flood control. It is the officially adopted vision for the reuse of Fort Monroe. A separate Technical Support Manual complements the Reuse Plan and provides additional detailed analysis, supporting documentation, and recommendations. For more information, visit *www.fmfada.com*.

National Park Service Reconaissance Study

The National Park Service (NPS) "Reconaissance Study" of Fort Monroe was the first step to evaluating the Fort for inclusion in the National Park System. This report recommended Congress defer decision on a Special Resource Study pending NPS review of the DOD approved Reuse Plan. The FMFADA will accept the National Park Service's offer to provide technical assistance in the interim, and is hopeful that the NPS will work with FMFADA to chart a course for greater involvement beyond technical assistance.

FORT MONROE PLANNING ESSENTIALS

Through the planning process, a series of principles were established to guide the preservation, reuse, and continued development of Fort Monroe. The Planning Essentials are a blueprint for action and should be followed throughout the evolution of the place.

1. PROTECT THIS HISTORIC PLACE AND KEEP IT VITAL
- first-quality stewardship of these shared treasures
- preserve and continually occupy the historic structures
- showcase and promote the history: tell the story

2. OPEN IT UP
- no gated streets
- expand the marina; open the beach
- continuous public waterfront esplanade / trail
- new multi-modal access at north end
- advertise the sense of community, not isolation

3. ESTABLISH A LARGE-SCALE OPEN SPACE PARK
- substantial recreational spaces and special places
- restored, protected environments
- green backdrop surrounds and extends from village

4. SEEK ECONOMIC SUSTAINABILITY
- finances to eventually offset annual maintenance bill, and restoration costs and operational costs... and more
- mix land uses and building types
- blend culture, commerce, workplaces, housing, tourism / lodging

5. ALLOW NEW DEVELOPMENT, WITHIN STRICT LIMITS
- insist upon compact, complete, connected, walkable urban form
- balance / choice in transportation: walking, cycling, transit, auto
- control height, geographic extent, and architecture
- fill in lost spaces, refine and complete street scenes
- restrict and inhibit any departures from the standards

Land Use Concepts and Limits

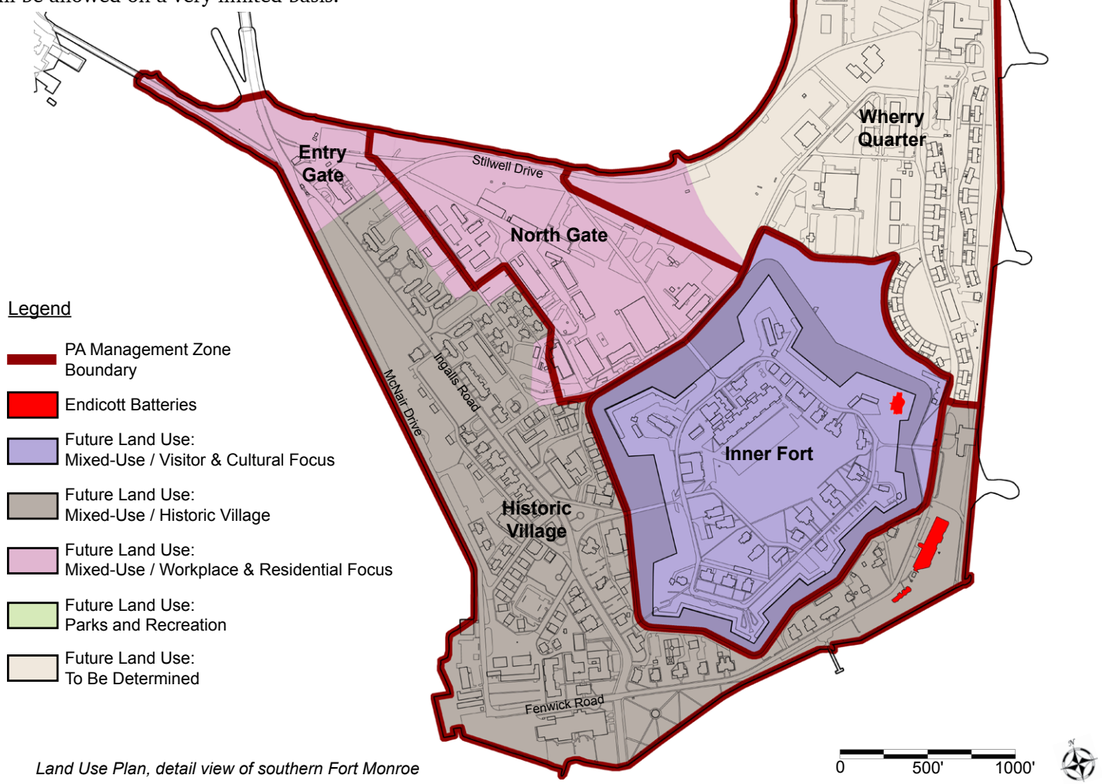
The Reuse Plan provides a framework for future decisions. Specific concepts and limits for future uses of the buildings and site are described, organized by the five management zones of the programmatic agreement (PA). Within each zone, various future land uses are proposed. Initial efforts for implementation will focus first on the reuse of existing structures; then on selective infill, reclamation of underutilized land, careful realignment of circulation patterns, and the establishment of a large-scale open space to the north; and lastly, on the redevelopment of plan areas for which a consensus regarding future use has not yet been determined.

Inner Fort

This area will require the strictest standard of preservation and protection. The Reuse Plan proposes no new development inside the stone fort; the existing buildings will be maintained and can be reused for a variety of purposes, including historic interpretation purposes, museums, meeting spaces, offices, lodging, and residences. The adaptive reuse of buildings will explore the unique opportunities presented for preservation, restoration, and rehabilitation and will look foremost to supporting the interpretation of the Fort as a historic site and enhancing cultural tourism.

Historic Village

This area has the largest concentration of historic buildings and includes a diversity of building types and ages. The goal is to create a complete mix of uses similar to those found in other historic towns and villages in the Tidewater region, and should include workplaces, shops, residences, lodging, and civic institutional uses. Historic buildings will be protected and reused. Selective infill development will be allowed on a very limited basis.



Land Use Plan, detail view of southern Fort Monroe

Entry Gate

The Entry Gate area is the primary entrance to Fort Monroe, located within the Historic Village management zone. Today, the existing circulation pattern is geared toward security, with one entrance to and from the Fort. It is recommended that this intersection be reconfigured to allow more than one option for entering and exiting. The reconfiguration should respect the historic character, preserve the alignments of bridges and street where possible, and combine historic structures together with new civic spaces and buildings to create a memorable, functional entry.

New buildings will follow established development standards and continue the character established by historic buildings on the Fort.

North Gate

The North Gate area spans north from the moat to Mill Creek; today, this area includes storage warehouses, surface parking lots, and garages. This area will most likely be used for new construction that integrates seamlessly with contributing historic structures and creates good addresses within a walkable urban framework. Pedestrian connections should be incorporated throughout, including sidewalks along all streets, crosswalks leading to key destinations, and a public trail along Mill Creek.

Wherry Quarter

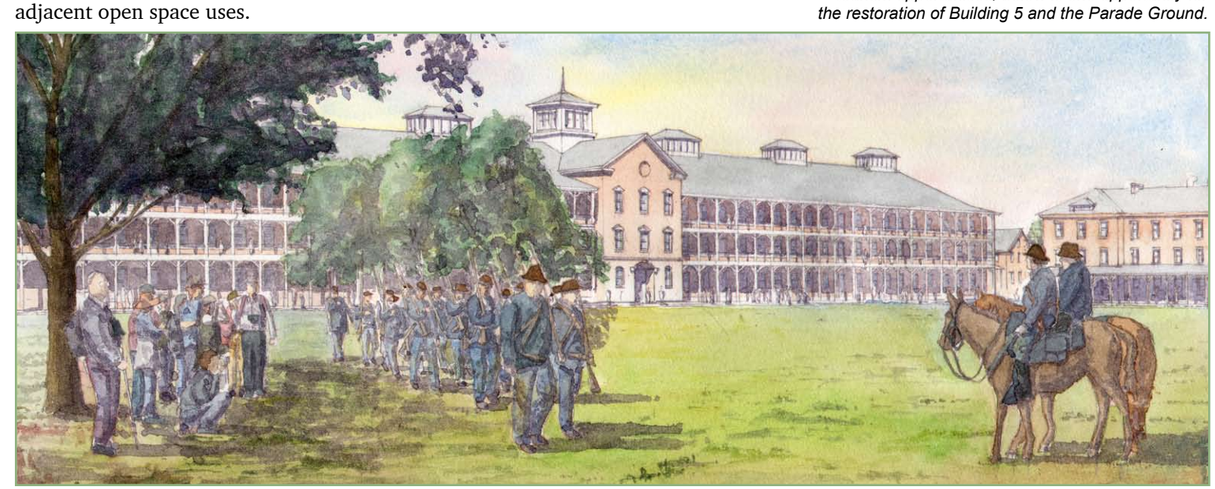
The Wherry Quarter is the area northeast of the moat. It contains warehouse and service/utility structures, surface parking, some areas of vacant space, and the Wherry housing units along the bayfront. The eventual land use and physical design of the majority of this zone is to be determined at a future date, after additional studies are completed. By focusing first on the reuse of existing buildings and selective infill development in other areas of the Fort, there will be ample time to make informed final decisions for this area.

View of Quarters 1 today; the reuse of historic buildings will preserve them for future generations.

Parks & Recreation Areas

The Parks and Recreation Area is divided into two sub areas; Parks and Recreation Area 1 is an area devoted to open space uses, including public beaches, preserved natural areas, recreation fields, and walking trails. Parks and Recreation Area 2 (part of the Wherry Quarter management zone) features open lands, existing buildings, several batteries, and areas where buildings were once located. The batteries are contributing historic structures to be preserved and potentially reused. Existing non-contributing buildings, such as the Bay Breeze Community Center, can remain or be redeveloped. New construction will be limited, conform to the same general geographic area as previous development, and support the adjacent open space uses.

The restoration of historic structures and landscapes within the Inner Fort area can enhance heritage tourism opportunities; below is one opportunity for the restoration of Building 5 and the Parade Ground.



introduction 1

Figure 1.1. Aerial View of Fort Monroe

Spanning 570 acres, Fort Monroe is located in Hampton, Virginia on Old Point Comfort where the Hampton Roads Harbor and Chesapeake Bay meet. Established as a U.S. Army installation in 1819, this National Historic Landmark District contains a diverse collection of buildings, structures, and landscapes rich in military and American history. Fort Monroe will be closed as a military facility in 2011 pursuant to the recommendations of the 2005 Base Realignment and Closure Commission (BRAC), and much of the land will revert to the Commonwealth of Virginia. After the Army leaves the post, every effort to retain and maintain the special qualities of this incredible place will be made. The Fort Monroe Reuse Plan is an important first step to promoting the proper preservation, reuse, and future evolution of this priceless historic treasure.

The Fort Monroe Federal Area Development Authority (FMFADA) was created by legislative action of the Virginia General Assembly in 2007 to study, plan, and recommend the best use of the resources that will remain when the Army vacates the post. The FMFADA is the official "Local Redevelopment Authority" (LRA) recognized by the Department of Defense. The FMFADA is an 18-member body with appointees from the City of Hampton, the Virginia House of Delegates and Senate, and the Governor of Virginia. The Board includes five Cabinet level officials and two specialists in historic preservation and heritage tourism.

The FMFADA relies on the expertise of national consultants in the areas of town planning, BRAC law, environmental engineering, historic architecture and preservation planning, structural engineering, housing market analysis, commercial/retail analysis, public relations/marketing, and tourism planning to inform the decision-making process.

The Fort Monroe Reuse Plan places a high priority on preserving, maintaining, and reusing historic buildings on Fort Monroe. Fort Monroe was designated a National Historic Landmark (NHL) in 1960. A primary objective for reuse is to minimize the impact on historic structures and permit limited new construction without jeopardizing the Fort's NHL status. The plan envisions the preservation of the majority of contributing buildings located within the Fort Monroe National Historic Landmark District; more than 170 buildings are proposed to remain and be reused. Together with the strategic repair and reuse of historic structures, the plan emphasizes the preservation of significant landscapes and viewsheds. Understanding that any new development at Fort Monroe will be subject to strict limits and regulations, the plan describes areas where some new construction is allowed.

The Fort Monroe Reuse Plan includes official policies, land use concepts and limits, and fundamental planning principles, as well as strategies related to preservation, economics, tourism, the environment, transportation, infrastructure, and flood control. The intent of the Reuse Plan is to define a framework, and provide a vision for future reuse. The concepts and ideas contained herein identify key opportunities and issues facing reuse; these concepts and ideas are intended to be further refined in future phases of planning. A separate Technical Support Manual, available at *www.fmfada.com*, complements the Reuse Plan and provides detailed analysis, supporting documentation, and recommendations to guide reuse. While the Reuse Plan is intended to be an officially adopted document, *The Technical Support Manual for the Reuse of Fort Monroe* is a working document that will be updated as plan details evolve.

Figure 1.2. Fort Monroe is the largest stone fort in the United States.

Figure 1.3. Lithograph from the Fort Monroe c asemate Museum, 1862

Figure 1.4. Fort Monroe, 1861

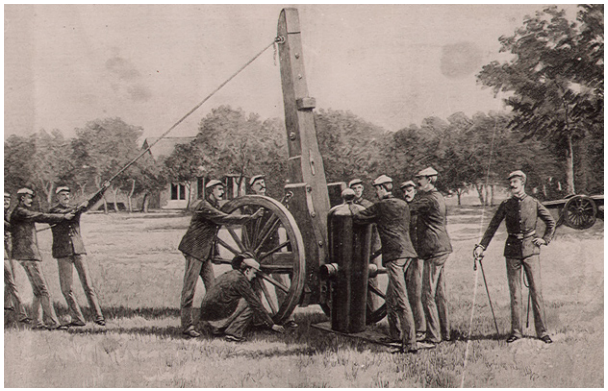


Figure 1.5. Artillery training on Parade Ground at Fort Monroe

HISTORY OF THE INSTALLATION

Fort Monroe was built between 1819 and 1834, but the history of fortifications on the site goes back nearly four centuries. In 1607, Captain John Smith recognized the strategic importance of this land, calling "Cape Comfort" an "isle fit for a castle". The name evolved to Point Comfort by 1609 and Old Point Comfort by the 1640s. In 1609 English colonists built Fort Algernourne here to protect the approaches to the colony at Jamestown. Throughout the colonial period, there were other fortifications at this site, but none lasted very long.

The British used the Old Point Comfort lighthouse as an observation tower during the War of 1812. The Chesapeake Bay was virtually defenseless during this conflict and the British were able to burn cities beginning with Hampton in June 1813 and ending with Washington, D.C. in August 1814. Our young nation was determined not to allow this to happen again and the United States upgraded its coastal defense system. Construction began on the stone fortification at Old Point Comfort in 1819 and continued for several years until it was declared complete in 1834. The fort was constructed as part of the Third System of coastal fortifications; it was the first of these forts to be built and was named in honor of President James Monroe. These fortifications were designed to be state-of-the-art for siege warfare in the early 1800's, and all were designed as substantial masonry structures. Fort Monroe, however, is unique in that it is the largest of the Third System fortifications, is built of stone, and it has a moat. Designed by Simon Bernard, the stone fort is an exceptional example of engineering and design.

Construction was not only limited to the fortification wall. Quarters, workplaces and support buildings were erected both inside and outside the walls. Growth spurts on the post naturally coincided with nationwide Army building campaigns that followed almost every major war effort. The presence of the Artillery Corps also influenced development. Training facilities specific to the Corps and housing for students and instructors is a significant portion of the surviving historic fabric. Many buildings reflect standard Quartermaster Corps designs for offices and housing units, but there are several unique structures, such as the Batteries that were essential to Fort Monroe's role as a coastal fortification.

Historically, the Civil War is the Fort's most significant period. The Fort remained in the Union and was never attacked by the Confederates. It served as the staging area for attacks along the southern coastline and against the Confederate capital at Richmond, Virginia. In 1861 the Fort earned the name "Freedom's Fortress"; escaped slaves came to Fort Monroe seeking refuge, and were declared contraband, the spoils of war, by commanding officer Major General Benjamin F. Butler. Eventually thousands of contrabands were granted freedman status under the Fort's protection.

Although this is the most significant period of the Fort, no structures built during the Civil War remain today.

After the Civil War, the Artillery Corps was re-established at Fort Monroe. The construction during this period is largely due to a nationwide Army building campaign for renovation and construction. The post Headquarters, the Old Post Office (Building 83), the frame houses inside and outside the fort, and Building 5 were erected during this period. The first of the Endicott Batteries, Battery Gatewood, DeRussy, Ruggles, Anderson, and Church, were completed in the Post Civil War Expansion Period.

At the beginning of the 20th century, the Artillery Corps, which encompassed both field and coast artillery, became separate units. The Coast Artillery School was located at Fort Monroe. The construction of the Coast Artillery School Complex (the current day TRADOC complex) and much of the housing on Fort Monroe was built during this period; Battery Parrott and Irwin were also finished. After coastal artillery became obsolete, and the Coast Artillery School was relocated to California, Fort Monroe became the headquarters for the Army Ground Forces and eventually the U.S. Army Training and Doctrine Command (TRADOC), continuing the installation's long history as a training post.

Over two centuries Fort Monroe's military tradition has melded with the grandeur of on-site hotels. Many grand hotels were built on Old Point Comfort during the 19th century. The 1st Hygeia Hotel was built in 1822, the Sherwood Inn in 1843, and the 1st Chamberlin Hotel in 1896. Only the Chamberlin, which was reconstructed after a 1920 fire in 1928, still stands on Old Point Comfort today. For more information on the history of Old Point Comfort as a resort destination, as well as prospects for future tourism uses, please see Section 5.

Permanent and temporary structures have been built, renovated, or torn down inside and outside the fort walls with every major Army building campaign through World War II. Today there is a diverse and extensive inventory of buildings, landscapes, and vistas that portray Fort Monroe's military past. The long history of the Fort, as well as its magnificent placement along the Chesapeake Bay, further reinforce the demand for a careful, considerate plan for reuse.

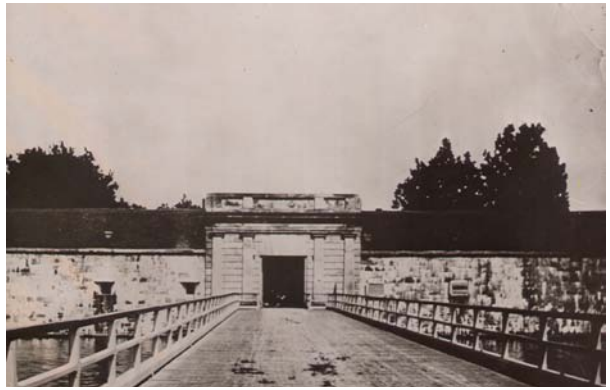


Figure 1.6. Main Gate bridge, early 1900's

Figure 1.7. c ompany of Artillery men in front of Barracks Building 5, 1861

Figure 1.8. c hamberlin Hotel, pre-1920s

Figure 1.9. Existing c onditions

Legend

- historic landmark contributing elements
- non-contributing buildings
- national historic landmark boundary
- planning area

Figure 1.10. Existing c onditions, detail view of southern Fort Monroe

EXISTING CONDITIONS

Fort Monroe is bound by Mill Creek to the west, the Chesapeake Bay to the east, and the Hampton Roads harbor to the south. The Buckroe community of Hampton is located north of the Fort and Phoebus to the west. Access to Fort Monroe is through Phoebus, with Mellen Street and Mercury Boulevard each leading to the Main Gate.

The date of construction for buildings on the post ranges from 1819 to 2005. All buildings on Fort Monroe, except for a few located along Dog Beach, are within the boundaries of the Fort Monroe National Historic Landmark District. The district consists of 157 contributing elements: 147 contributing buildings, 6 landscape features, 3 structures, and 1 stone fort (with 11 named or numbered elements).

There are 300 housing units and 1.5 million square feet of non-residential structures on Fort Monroe. Over 13 acres of sand beach are visible at high tide, stretching the 2.3 mile eastern shore. In addition, there are numerous parks and open spaces spanning 130 acres, as well as a 332 slip marina. The street network that currently exists on Fort Monroe consists of a loose grid of blocks and streets. Careful tree plantings over many years have led to a lush green canopy and beautifully landscaped, tree-lined streets.

For more detail on the existing conditions of the site, please see Section 3: Land Use Concepts and Limits.

PUBLIC PLANNING PROCESS

Community involvement was an essential component in creating a workable vision and plan for the future of Fort Monroe. The visualizations, plans, and recommendations found in the Fort Monroe Reuse Plan are the result of extensive public input from citizens, experts, and local and state leaders. In July 2006, interested citizens came together in an open planning process to identify the ideas, needs, and concerns regarding the future of Fort Monroe. Organized as an intensive design event called a charrette, the community and team of design professionals worked to create the plan over the course of seven days. More than 600 interested residents and stakeholders participated in the planning process, including neighbors, business people, elected officials, and community leaders.

Following the design charrette, a draft plan was presented to the public in November 2006. The plan was then refined and additional meetings were held to gather public input. Since May 2007, participants have continued to have the opportunity to provide public comments at Fort Monroe Federal Area Development Authority meetings, as well as through written feedback and the formal public hearing process.

Figure 1.11. Over 200 community members attended the Kick-off event during the design charrette.

Figure 1.12. At the Hands-on design Session, participants gathered in small groups and drew ideas on maps.

Figure 1.13. Meetings of the Fort Monroe Federal Area development Authority have guided the Reuse Plan and allowed opportunity for continued public comment.

planning essentials 2

Through the planning process, the community and design team arrived at a series of basic urban design, preservation, and policy principles to guide the preservation, reuse, and continued development at Fort Monroe. Shaped from input from participants during the charrette, the "Planning Essentials" embody a shared vision for the future of Fort Monroe. The Planning Essentials are a blueprint for action and will be followed consistently throughout the evolution of the site. They will guide the work of the Fort Monroe Federal Area Development Authority, local and state leaders, and community members to ensure that the reuse of Fort Monroe remains true to the community's vision.

This chapter presents the broad scope of the proposed reuse for Fort Monroe; the application of these essentials in the Reuse Plan is described and illustrated in Section 3, and in *The Technical Support Manual for the Reuse of Fort Monroe*.

FORT MONROE ESSENTIALS

1. PROTECT THIS HISTORIC PLACE AND KEEP IT VITAL

- first-quality stewardship of these shared treasures
- preserve and continually occupy the historic structures
- showcase and promote the history: tell the story

2. OPEN IT UP

- no gated streets
- expand the marina; open the beach
- continuous public waterfront esplanade / trail
- new multi-modal access at north end
- advertise the sense of community, not isolation

3. ESTABLISH A LARGE-SCALE OPEN SPACE PARK

- substantial recreational spaces and special places
- restored, protected environments
- green backdrop surrounds and extends from village

4. SEEK ECONOMIC SUSTAINABILITY

- finances to eventually offset annual maintenance bill, restoration costs, operational costs... and more
- mix land uses and building types
- blend culture, commerce, workplaces, housing, tourism / lodging

5. ALLOW NEW DEVELOPMENT, WITHIN STRICT LIMITS

- insist upon compact, complete, connected, walkable urban form
- balance and choice in transportation: walking, cycling, transit, auto
- control height, geographic extent, and architecture
- fill in lost spaces, refine and complete street scenes
- restrict and inhibit any departures from the standards

1. PROTECT THIS HISTORIC PLACE AND KEEP IT VITAL

Designated as a National Historic Landmark in 1960, Fort Monroe is a one-of-a-kind, irreplaceable part of our American heritage. From the establishment of Fort Algernourne in 1609 to Major General Benjamin Butler's declaration of escaped slaves as "contraband" to the long-time coastal defense of the Hampton Roads harbor, Fort Monroe truly is a centerpiece in American history. The buildings and landscapes that are the backdrop to this history will be preserved. Just as the military did for so long, Fort Monroe's new guardians will preserve both the place and its story.

As the Army prepares to vacate Fort Monroe in 2011, the Army and FMFADA will work together to properly maintain and transition the management of these historic structures from the U.S. Army to the Commonwealth of Virginia (or its designated agent). Fort Monroe will not be frozen in time or preserved solely as a museum, but will be a living and vibrant part of the Hampton Roads community. Historic structures will be re-occupied with new residents and tenants as soon as available. Heritage and recreational tourism programs will be created to attract visitors to the Fort. New neighbors and visitors will help to animate the place and also share in some of the financial burden associated with maintaining this historic landmark.

2. OPEN IT UP

Under Fort Monroe's current configuration as a U.S. Army installation, the public may enter onto the post but only after receiving a day pass from the guard house. When the Army vacates the Fort and the secure perimeter is therefore no longer needed, Fort Monroe will be opened up and made accessible to all. With its rich history and significant open spaces, Fort Monroe will be shared and enjoyed by many, not just the people that live or work here full time. It is time to tell the living story of Fort Monroe, and invite people in to share in its past, present, and future.

When marketing Fort Monroe to potential residents, businesses, and institutions, it will be promoted as a historic *community* – a community that is an integrated part of the greater Hampton Roads region, not one that is isolated from its surroundings. Open spaces will be shared; no portion of the Fort Monroe waterfront should become private property. The Old Point Comfort Marina should be expanded to give more people access to the water. Boating regattas and other water-oriented activities on Mill Creek should be encouraged as a way to open up the Fort Monroe waterfront to the entire community. On the Chesapeake Bay side, the beaches will be open to the public. The boardwalk along the enhanced seawall will form a continuous public waterfront esplanade. Walking trails will be provided throughout the Fort, allowing easy access to the waterfront, recreation, and natural preservation areas. Small greens will be created as

Figure 2.1. View of Building 5 in 1879

Figure 2.2. View of Building 82 today; the reuse of historic buildings will allow them to be preserved for future generations.

Figure 2.3. View of Building 119 today. Stately homes face Continental Park and the Chesapeake Bay, and contribute to the rich architectural heritage of the Fort.

Figure 2.4. Existing conditions on McNair Drive and the Old Point Comfort Marina; an expanded marina would make the waterfront accessible to more residents and visitors.

Figure 2.5. Existing conditions from the Old Point Comfort Lighthouse to Engineer Pier; a continuous public waterfront esplanade is envisioned along the existing seawall.

part of infill development to add to the green network already in place on the Fort and to provide additional public areas for gathering and relaxation.

The street network must be improved to include a vehicular and pedestrian connection to the north; in addition, there should be more than one option created for entering and leaving the Fort at the existing entry gate area. Internal to Fort Monroe, the grid of streets that currently exists should be enhanced through additional connections. While managing automobile needs, a finer network of streets reduces the need for wider streets and increases the walkability of the place by providing shorter routes for pedestrians and bicyclists.

Pedestrian activity will be supported throughout the Fort. New streets will be pedestrian-friendly, with trees and on-street parking separating pedestrians from moving vehicular lanes; streets will be designed for slow travel speeds, to further enhance the pedestrian experience. Improvements to the existing street and pedestrian networks will provide a finer network of streets with greater options for mobility, and greater connectivity between Fort Monroe and its surrounding communities.

3. ESTABLISH A LARGE-SCALE OPEN SPACE PARK

Fort Monroe's prominent location along the Chesapeake Bay presents a unique opportunity to reclaim part of the disappearing shoreline of Virginia's coast and establish a large-scale open space park on the property. During the public planning process, participants expressed the need for additional open space for the region and the surrounding community.

The expansive open areas that exist today on Fort Monroe are part of its character. Many of these open spaces will be preserved and maintained as substantial recreational spaces. While the exact program of recreational uses remains to be determined, both active and passive recreational opportunities will be offered.

In addition to recreational spaces, the natural areas located at the northern end of the Fort will be protected. The marsh and wetland areas that extend into Mill Creek will be restored and preserved as sensitive habitats. Invasive plant species will be removed and stormwater run-off from the developed areas of the Fort will be carefully managed to minimize adverse effects on the natural environment. A nature center should be considered adjacent to the natural areas to educate and inform visitors on the important Tidewater ecosystem. Environmentally-friendly paths and trails along the nature preserve, and throughout Fort Monroe, should be included. In addition, strict measures will be taken to protect the Mill Creek

Figure 2.6. Beaches will be part of the large-scale open space network at Fort Monroe.

Figure 2.7. Existing long views across open space at the northern end of the Fort.

Figure 2.8. Existing view of Continental Park on the Chesapeake Bay; together with the recreational open space to the north, a large-scale green space network is formed.

Figure 2.9. Potential office use

Figure 2.10. Potential lodging use

Figure 2.11. Potential residential use

and Chesapeake Bay shorelines. Beach renourishment programs are already being put in place and the physical infrastructure along the shorelines improved to prevent erosion.

Understanding that the reuse of Fort Monroe includes the preservation and extension of the Historic Village at the southern end of the property, the recreational and natural open spaces will be incorporated into the overall Fort Monroe community to provide a green backdrop for the settled areas.

4. SEEK ECONOMIC SUSTAINABILITY

The Commonwealth of Virginia and Hampton Roads community must work together to create an economically sustainable future for the Fort. The plan for the future of Fort Monroe must include a balance of funding mechanisms and revenue generators to reach an equilibrium that ensures maintenance of the Fort and its public programs. This means people will be invited to live, work, spend the night, or eat a meal on Fort Monroe. The special features of Fort Monroe that benefit everyone must be balanced with a financial model that helps Hampton reclaim the economic loss of jobs and activity associated with the Army leaving Fort Monroe. Even if all of the existing buildings were to be re-occupied by new tenants paying market-rate rents, there will not be enough surplus income to cover these costs. To reach the goal of preservation and economic sustainability, therefore, there must be some additional, but strictly controlled, development at Fort Monroe.

The reuse of Fort Monroe will not focus on one single land-use option or a single financial transaction. A mix of land uses and building types is important not just for the social culture of any community, but for economic reasons as well. An enduring settlement contains not just houses or workplaces, but a mix of uses that are adaptable for change over time. A variety of uses within a neighborhood, including commercial businesses, creates the ability to live, work, shop and find other services within walking distance. Encouraging a balance of people living and working on Fort Monroe provides multiple benefits, including fewer daily trips that rely on the regional road network, increased support for local businesses, and new and historic housing options to accommodate a diverse population.

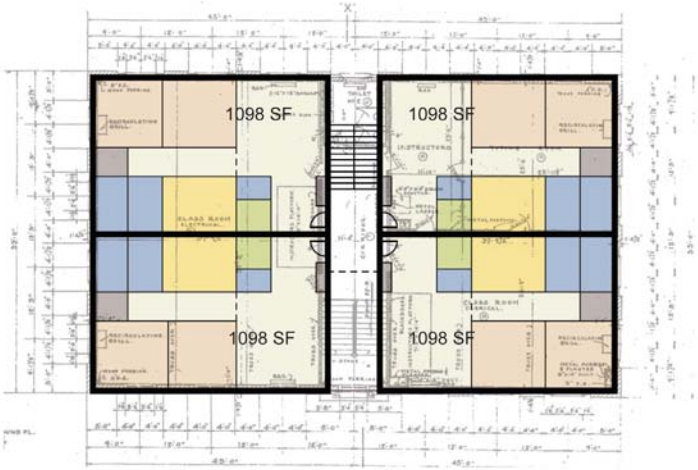
In addition to more people living and working on Fort Monroe, it is important to have a blend of cultural, civic, entertainment, and education opportunities. For instance, tourism and lodging will be accommodated in the mix of uses. From small bed-and-breakfast establishments to larger lodging accommodations, opportunities will exist on Fort Monroe for people to come and visit the place and stay longer than a day.

Figure 2.12. Building 133, existing conditions (above); potential reuse floor plan (below).

Figure 2.13. Building 163, existing conditions (above); potential reuse floor plan (below).

BUILDING NO. 133 - COAST ARTILLERY SCHOOL : OFFICERS BUILDINGS

- 22 units (11 units per floor; 4 one-bedrooms; 4 two-bedrooms; 3 lofts)
- Average SF/ unit : 1130



BUILDING NO. 163 - COAST ARTILLERY SCHOOL

- 12 units (4 units per floor; 4 two-bedrooms)
- Average SF/ unit : 1098

Bathroom | Bedroom | Living/ dining or Loft areas | Kitchen | Storage | Utility

Bathroom | Bedroom | Living/ dining or Loft areas | Kitchen | Storage | Utility

Old Point Comfort's 400 years of recorded history offers a meaningful and multi-faceted educational experience for residents, students and travelers to enjoy. A comprehensive effort will enable visitors to thoroughly experience Fort Monroe's stunning architectural themes, wonderful Chesapeake Bay and Hampton Roads stories, and dramatic history. A heritage tourism program will be established to attract visitors to the area and showcase the unique stories embedded in the Fort's soil.

For more information on the market and tourism strategy for the reuse of Fort Monroe, please see Sections 4 and 5 of this document.

5. ALLOW NEW DEVELOPMENT, WITHIN STRICT LIMITS

The physical structure and form of Fort Monroe has continually changed over time. The Fort is an ever-evolving place in American history and yet, it is agreed, the historic patterns of Fort Monroe must be protected and preserved. While the historic urban fabric is maintained and reused, there is an opportunity for additional areas of the Fort to be rethought and carefully redeveloped. Some new development will be allowed on Fort Monroe, in specified areas *and within strict limits*.

New development will make Fort Monroe more complete, not subtract from its special character. The new and recast neighborhoods will be compact, complete, connected, and walkable. They should be inspired by the urban design lessons drawn from the Fort itself and the many ways the Fort reflects forms found in the best historic Tidewater settlements. The area of Fort Monroe that currently contains the back of house and service areas could be reclaimed and filled-in. The new and recast neighborhoods of Fort Monroe will incorporate a mix of uses and street-oriented architecture.

Prior to any new development or reuse at Fort Monroe, strict standards will be put in place to regulate the character and quality of new construction. These design standards will include regulations to control building height, form, geographic extent of development, and architectural styles. The design standards will further ensure that historic structures are maintained to the highest of standards and new structures complement the existing historic fabric.

Figure 2.14. Limited new construction will continue the character established by historic buildings on the Fort.

Figure 2.15. New buildings will follow established design standards. These standards will regulate building height and form, and should include requirements for building elements (such as doors, windows. porches or stoops) that provide natural surveillance and create high-quality public spaces.

land use concepts and limits 3

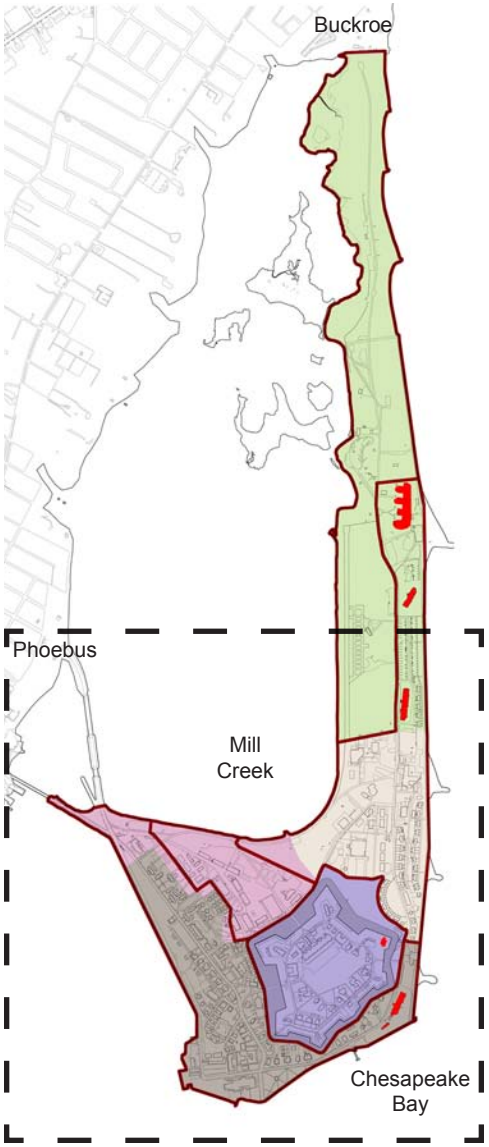


Figure 3.1. Land Use Plan

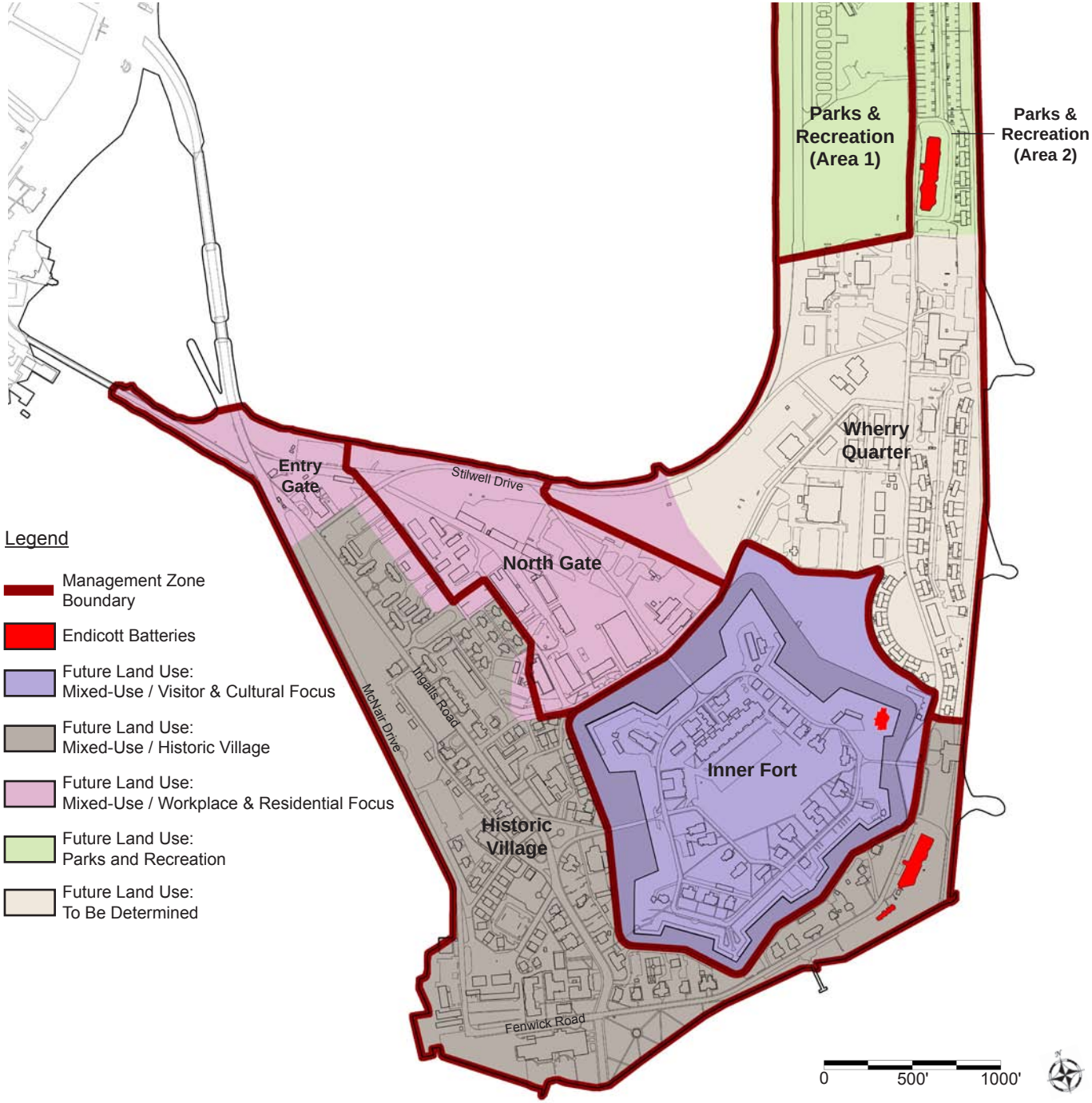


Figure 3.2. Land Use Plan, detail view of southern Fort Monroe

In this section, specific concepts and limits for future uses of the buildings and site are described, organized by the five distinct management zones of the programmatic agreement (PA). The zones are delineated in Figure 3.1 (Land Use Plan); within each zone, various future land uses are proposed. The plan provides a framework for future decisions according to the planning essentials, and allows flexibility over time where needed as additional analyses are performed and market conditions vary. As the Reuse Plan is implemented, initial efforts will focus on the reuse of existing structures; then on selective infill, reclamation of underutilized land, careful realignment of circulation patterns, and the establishment of a large-scale open space to the north; and lastly, on the redevelopment of plan areas for which a consensus regarding future use has not yet been determined. A variety of urban design concepts, including documentation of the three original scenarios created through the 2006 public planning process, plus detailed drawings of the preferred scenario, are contained in *The Technical Support Manual for the Reuse of Fort Monroe.*

As part of the Base Realignment and Closure (BRAC) process the Army is required under Section 106 of the National Historic Preservation Act to evaluate the historic properties at Fort Monroe and to establish specific steps to avoid or reduce harm to such properties (please see description of the programmatic agreement, right).

SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED, AND ITS RELATIONSHIP TO THE REUSE PLAN:

Prior to its departure from Fort Monroe, the Army is required by federal law to take into account the effects of its departure on historic properties and to provide the Advisory Council on Historic Preservation (Advisory Council) a reasonable opportunity to comment. This requirement is codified in Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), and is triggered by the Army's proposed departure.

As part of its planning process and compliance with Section 106, the Army has consulted with the Advisory Council, the Virginia Department of Historic Resources and over 32 other consulting parties including federally recognized tribes, the Fort Monroe Federal Area Development Authority, the City of Hampton, and various community and citizen groups on ways to avoid, minimize, or mitigate the potential effects of its departure on historic properties. It is important to note that the focus of Section 106 consultation is on outlining a process for ensuring consideration of potential effects to historic properties, not on specific reuse scenarios. As such, consultation resulted in a programmatic agreement that outlines specific responsibilities and actions for various parties to ensure that historic properties are appropriately considered in the future planning and use of Fort Monroe (to review details of the programmatic agreement, please refer to *The Technical Support Manual for the Reuse of Fort Monroe*).

The programmatic agreement establishes a series of management zones (see Figure 3.3) and associated historic property treatment guidelines that provide future users of Fort Monroe with basic direction and guidance regarding historic properties. The intent of the management zones is to recognize that while Fort Monroe as a whole is historic, there are distinct differences in the way the property developed over time and these differences needed to be considered in the future planning and management of Fort Monroe's historic properties. The programmatic agreement also requires development and use of design standards that provide detailed guidance for the treatment of existing historic properties, as well as construction of new facilities where appropriate.

The creation of the Reuse Plan occurred in close coordination with the Section 106 consultation process. The programmatic agreement management zones and associated treatments were used as guides in developing and evaluating various reuse scenarios. The design standards and review processes outlined in the programmatic agreement will guide further revisions to the reuse plan and ultimately its implementation.

Figure 3.3. The proposed management zones of the programmatic agreement, with "Transition Areas" outlined.

The management zones of the programmatic agreement (PA) contain a distinct set of criteria for acceptable demolition, preservation, and reuse of buildings, and appropriate methods for infill or new development. To best accommodate sensitive transitions, provide fluidity between zones, and guarantee the best outcomes in the preservation and reuse of Fort Monroe, there will need to be discretion used when applying the criteria to buildings and lands located along the boundaries between zones. The Reuse Plan directs that land located along a boundary be thought of as a "transition area" – a blending of adjacent zones where the rules are to be applied with extra care and flexibility, at the discretion of the State Historic Preservation Officer. These transition areas are depicted in Figure 3.3. Not every area deemed suitable for development by the PA is proposed for development by the Land Use Plan; for example, the area north of the Wherry Quarter is considered eligible for development under the PA but the Land Use Plan proposes minimal development, if any, in the Parks and Recreation Areas. In some transition locations between PA management zones, the illustrative plans show wider greenbelts and more generous park spaces, to best showcase the historic resources or to implement the preferred walkable designs.

KEY PRINCIPLES OF THE PROGRAMMATIC AGREEMENT INCLUDE:

- Recognize and protect the Fort's NHL status
- Preservation through reuse and rehabilitation
- Provide public access to the Fort
- Support economic sustainability
- Consider effects to Fort Monroe as a whole
- Continued enforcement for future parties

RESPONSE TO THE NATIONAL PARK SERVICE RECONNAISSANCE STUDY:

The findings in the Reuse Plan have been evaluated in light of the National Park Service (NPS) Reconnaissance Study Report. We consider the NPS Reconnaissance Study the first step to explore ways the FMFADA and the NPS can work in partnership together.

The National Park Service has offered technical assistance and the FMFADA intends to accept the offer. We are hopeful that NPS will work with FMFADA to chart a course for greater involvement by NPS beyond said technical support. NPS will be invited to join us as we develop an interpretive master plan and visitor services. We will be using a model developed by the Park Service for historic sites, to ensure that our planning is in keeping with the NPS standards. Other areas for NPS collaboration and involvement will be identified as we move the planning process forward. Information drawn from the NPS study can be found in Section Five (Tourism Strategy).

Figure 3.4. Illustrative Plan, depicting applied land use concepts and limits for the reuse of Fort Monroe. This is not a regulatory drawing; it is meant to illustrate land use concepts, and may be used to guide the future reuse of the Fort. The plan illustrates the preservation of the urban fabric of Fort Monroe, including historic structures and landscapes, and infill development in appropriate areas, and within strict limits.

Figure 3.5. Illustrative Plan, detail view of southern Fort Monroe

Figure 3.6. The Lincoln House (Quarters 1) is one of the historic treasures located inside the stone fort.

Figure 3.7. The Casemate Museum at Fort Monroe

Figure 3.8. Existing residences within the Inner Fort

INNER FORT

The most valuable historic resource at Fort Monroe is the old fort itself. Not only does it contain the oldest structures on post, but it provides the locations where historic events of national and international significance took place. Examples of architectural excellence and historic importance from the earliest permanent period of development include the Lincoln House (Quarters 1), the Tuileries (Quarters 17 and 18), the five Casemate fronts, the Chapel of the Centurion, and the Sally Port (Main Gate). The Parade Ground is the central organizing feature of the old fort. It is the termination of the vistas through the Main and North Gates from across the moat. The Parade Ground is bordered on the south, east, and west edges by mature live oak trees. To the north, Building 5 provides a firm, architectural backdrop. The southwest corner of the fort is a unique area due to the concentration of historic sites, the location of the Casemate Museum, and fine architecture all located in a well-maintained, park-like setting.

This historic center will require the highest standard of preservation and protection. The Reuse Plan proposes no new development inside the stone fort. The Land Use Plan designates this area as "Mixed-Use / Visitor & Cultural Focus". The existing buildings will be maintained and can be reused for a variety of purposes, including historic interpretation purposes, museums, meeting spaces, offices, lodging, and residences. The adaptive reuse of buildings will explore the unique opportunities presented for preservation, restoration, and rehabilitation. Restoration and rehabilitation efforts may include enhancements such as the removal of non-historic additions, and restoration of building façades to their historic appearance. Outside of the fort walls and moat, the remains of the Water Battery will be preserved and the area surrounding the battery maintained as an open space. The highest priority will be placed on incorporating a mix of uses that attracts visitors to this special area, and showcase Fort Monroe's extensive history.

CONCEPTS AND LIMITS FOR REUSE OF THE INNER FORT AREA:

- The Land Use Plan designates this area as "Mixed-Use / Visitor & Cultural Focus".
- Historic buildings will be protected and can accommodate a variety of new uses, including historic interpretation purposes, museums, meeting spaces, offices, lodging, and residences. The adaptive reuse of buildings will explore the unique opportunities presented for preservation, restoration and rehabilitation.
- No new development is proposed for this area.
- Surface parking lots will be removed from the Parade Ground to restore the historic landscape.

Figure 3.9. The restoration of historic structures and landscapes within the Inner Fort area can enhance heritage tourism opportunities; above, one opportunity for the restoration of Building 5 and Parade Ground is illustrated.

Figure 3.10. Existing conditions of Building 5, as viewed from the Parade Ground today.

Future decisions related to preservation, restoration, and rehabilitation will look foremost to supporting the interpretation of the Fort as a historic site, and enhancing cultural tourism. For example, the restoration of the south façade of Building 5 presents the opportunity to enhance both the building and the northern boundary of the Parade Ground. Being a first-class steward of the resource includes protection of the National Historic Landmark status while seeking opportunities for adaptive reuse, education, and interpretation. The FMFADA directs that the area encompassing the moat, stone fort, Water Battery, and certain surrounding areas should be managed to ensure that the historic buildings and landscapes within the stone fort be protected in perpetuity. Programming and funding for museums, cultural facilities, and other heritage tourism related services will be pursued. The FMFADA will further explore appropriate management, programming, and tourism activities to attract visitors to Fort Monroe.

This historically significant area will require careful design to screen parking, with as much visitor parking as possible located within a comfortable walking distance outside of the fort walls and moat. For example, one area of priority for the removal of parking is the surface parking lot that currently occupies a portion of the Parade Ground. The FMFADA plans to restore this central green space, which will provide a gathering area for visitors and restore prominence to the surrounding historic buildings.

CONCEPTS AND LIMITS FOR REUSE OF THE HISTORIC VILLAGE AREA:

- The Land Use Plan designates the majority of this zone as "Mixed-Use / Historic Village". The future land use will be a complete mix of uses similar to those found in other historic towns and villages in the Tidewater region, and should include workplaces, shops, both single and multi-family residences, lodging, and civic institutional uses.
- There is a small portion of the Historic Village zone that has been designated "Mixed-Use / Workplace & Residential Focus", near the entry to the Fort and along Pratt Street. The concepts and limits for the future land use of these transition areas are further described in the Entry Gate and North Gate sections.
- Historic buildings and landscapes will be protected, and can accommodate a variety of new uses. The adaptive reuse of buildings will explore the unique opportunities presented for preservation, restoration, and rehabilitation.
- Selective infill development is proposed where buildings previously existed. New buildings will respect the character of historic buildings by having similar massing and architectural elements, and follow the Design Standards established in *The Technical Support Manual for the Reuse of Fort Monroe*.
- The Old Point Comfort Marina should be expanded, further increasing public access to the waterfront.
- Structured parking may be permitted in the Historic Village to accommodate the reuse of existing buildings, including the Chamberlin Hotel. Structured parking should be lined with habitable spaces to provide a pedestrian-friendly front to public spaces, including streets, parks, and waterfront areas.

HISTORIC VILLAGE

Directly outside the fort walls to the west, an assortment of graceful buildings face tree-lined streets in a compact village setting. The area is organized around Ingalls Road, providing direct access from Fort Monroe's main entrance to the old fort's Main Gate and the TRADOC center complex. This area has the largest concentration of historic buildings and includes a diversity of building types and ages. It is a very cohesive section of the Fort due to the consistent scale of buildings, materials used in construction, and landscaping. Standard Quartermaster Corps plans, architect-designed buildings, housing, administrative, training, and support buildings tied together by unified landscaping create a pleasing ambiance with a residential scale and rhythm.

Along the Chesapeake Bay, stately Officers' quarters line Fenwick Road and face the water. Frequently called "The Gold Coast," its focus is Continental Park. The park and the seawall

are popular public places. Architecturally, all of the houses are quite handsome. The visual appeal of this area is not limited to the residences that front Fenwick Road. The views of the harbor and the Bay are unrivaled. The old fort walls provide a backdrop for the houses and there are many picturesque views of the moat. The Flagstaff Bastion, where the official flag of Fort Monroe is flown, is a distinctive visual landmark.

The Land Use Plan designates the majority of this zone as "Mixed-Use / Historic Village" There is a small portion of the Historic Village zone that has been designated "Mixed-Use / Workplace & Residential Focus", near the entry to the Fort and along Pratt Street. The concepts and limits for the future land use of these transition areas are further described in the Entry Gate and North Gate sections.

The future land use in the "Mixed-Use / Historic Village" area will be a complete mix of uses similar to those found in other historic towns and villages in the Tidewater region, and should include workplaces, shops, both single and multi-family residences, lodging, and civic institutional uses. Historic buildings will be protected, and reused to accommodate a full mix of planned uses. The adaptive reuse of buildings will explore the unique opportunities presented for preservation, restoration, and rehabilitation. Selective infill development will be allowed in appropriate locations, on a very limited basis.

Generally, infill buildings should be located in areas where buildings previously existed. New buildings should respect the character of historic buildings by having similar massing and architectural elements. The street alignments of Ingalls Road, McNair Drive, and Fenwick Road will be preserved without widening. Minor additions to the street network to increase connectivity may be considered, provided they do not disturb historic circulation patterns. Continental Park, Cannon Park, and Reeder Circle are significant landscape features listed as contributing elements to the NHL District. All should be preserved and maintained, and should be used as a precedent for creating high-quality public spaces elsewhere on the Fort.

The Chamberlin Hotel, located within the Historic Village area, is the tallest existing building on the installation; while the 9-story building creates a focal silhouette along the shoreline, it should be an exception to the model for development, so that it retains its signature quality. Infill buildings within the Historic Village should maintain a 2 to 3 ½ story height limit.

The Old Point Comfort Marina is located along McNair Drive within the Historic Village area. To implement the essential planning idea of "opening up" the Fort to a variety of users, this marina should be expanded with the addition of new boat slips and a new marina facility. The expansion will grant users access to the

Figure 3.11. Ingalls Road, existing conditions

Figure 3.12. Existing residences on Ingalls Road

Figure 3.13. Old Point Comfort Marina, existing conditions

CONCEPTS AND LIMITS FOR REUSE OF THE ENTRY GATE AREA:

- The Land Use Plan designates this area as "Mixed-Use / Workplace and Residential Focus".
- Historic buildings will be protected, and can accommodate a variety of new uses. The adaptive reuse of buildings will explore the unique opportunities presented for preservation, restoration, and rehabilitation.
- The street circulation pattern in the Entry Gate area will be redesigned, preserving existing bridges and street alignments where possible while allowing for more than one option for entering and exiting.
- A new civic space should be created to establish a memorable entry sequence to the Fort.
- Any new buildings or structures will be compatible with the existing architectural character of the Historic Village area, and follow the Design Standards as established in the *Technical Support Manual for the Reuse of Fort Monroe*.

water, whether by means of boat storage, boat usage, or simply walking along the docks. In addition, the boardwalk along the seawall facing the Chesapeake Bay will be expanded and enhanced, forming a continuous public waterfront esplanade.

The former Chamberlin Hotel is controlled by a private entity (OPC Hampton, LLC) under a lease with the Department of the Army. The lease was signed prior to the recommendations of the 2005 BRAC Commission. With the use of historic preservation tax credits, the building is currently being renovated and transformed into senior housing. The current site plan for the property includes surface parking adjacent to the main building; the future development of the site will need to include an assisted living center and structured parking (on or off-site) to handle parking needs. The new garage, whether constructed on or off-site, should be lined with habitable spaces to provide a pedestrian-friendly front to public spaces, including streets, parks, and waterfront areas.

ENTRY GATE

The Entry Gate is part of the Historic Village management zone; it is the primary entrance to Fort Monroe, located at the convergence of Mellen Street and Mercury Boulevard. Today, the existing circulation pattern is geared toward security, with one entrance leading past guard houses which controls access to and from the Fort. Once the Army vacates the post, it will be necessary to make the Fort readily accessible for residents, workers, and visitors.

The Land Use Plan designates this area as "Mixed-Use / Workplace and Residential Focus". Given the constraints of the existing entrance, it is recommended that the intersection be reconfigured to create two separate ways in and out of Fort Monroe. This reconfiguration needs to respect the historic character of the entrance and preserve existing bridges and street alignments where possible, yet allow more than one option for entering and exiting. The reconfiguration of the entry circulation should utilize existing historic structures together with new open spaces and buildings to create a memorable entry to this important place. New buildings will reflect the scale, setbacks and character of the Historic Village, be 2 to 3 ½ stories in height, and be sited to define high-quality public spaces.

For more information on the proposed reconfiguration of the entrance, please see Section 7 and *The Technical Support Manual for the Reuse of Fort Monroe.*

NORTH GATE

The North Gate area is located north of the moat, spanning from the moat to Mill Creek. This area has been changed many times, according to evolving needs and circumstances.

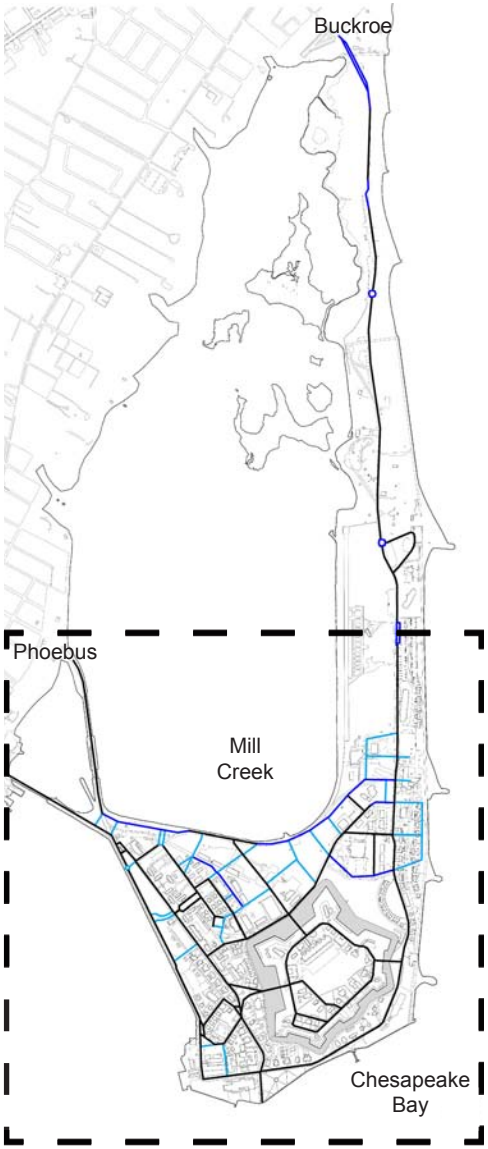


Figure 3.14. Street alignment concepts. Additional maps that describe the details of the street modifications envisioned are contained in *The Technical Support Manual for the Reuse of Fort Monroe*.

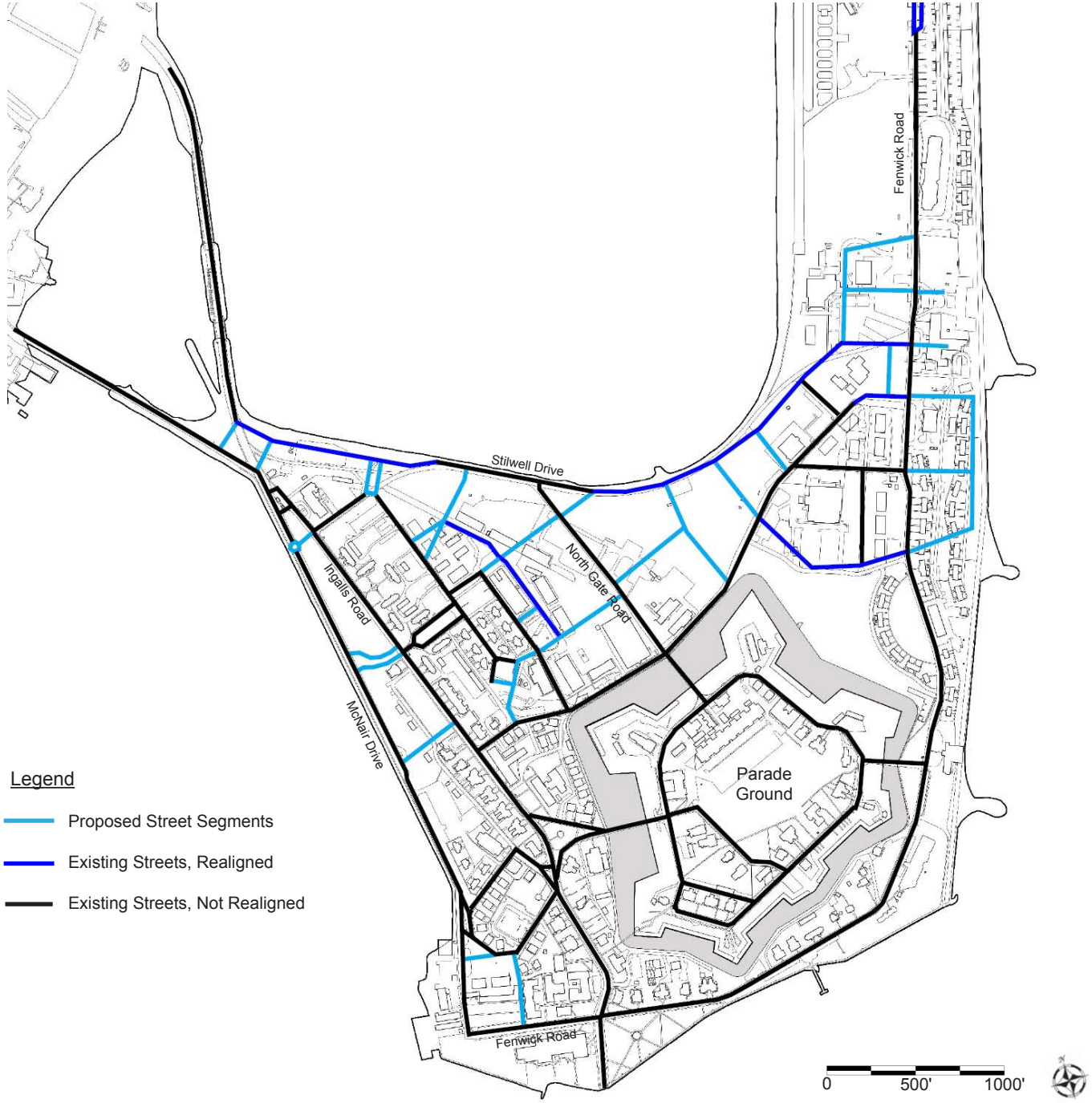


Figure 3.15. Street alignment concepts, detail view of southern Fort Monroe

CONCEPTS AND LIMITS FOR REUSE OF THE NORTH GATE AREA:

- The Land Use Plan designates this area as "Mixed-Use / Workplace and Residential Focus".
- Historic buildings will be protected and adapted to accommodate a variety of new uses. The adaptive reuse of buildings will explore the unique opportunities presented for preservation, restoration, and rehabilitation.
- Controlled new construction will be encouraged in this area, to transform the existing service landscape into a pedestrian-friendly entrance to the historic fort. New buildings may accommodate a variety of uses, including residential, office, commercial, civic, and lodging. Any new building or structure will be limited to 2 to 3 ½ stories in height, and follow the Design Standards as established in the *Technical Support Manual for the Reuse of Fort Monroe*.
- Existing street rights-of-way will be reused, where feasible; in addition, new street rights-of-way could be added to create smaller, walkable block sizes. The new and existing streets should form an interconnected network to provide multiple options for navigation and should include on-street parking, sidewalks, and street trees.
- New amenities should be provided, including neighborhood parks, access to the Mill Creek waterfront, and pedestrian amenities such as crosswalks and sidewalks.

It has historically been used for storage warehouses, surface parking lots, and garages for grounds-keeping vehicles, among other uses. Many of the structures date from the 1930s and there are a few of architectural merit, including Building 56 (a Quartermaster Corps Colonial Revival style design), Building 57 (a unique Egyptian Revival façade) and Buildings 59 and 135 (good examples of period industrial design). There are no structures of any individually historic importance in this area.

Much of the land in the North Gate area is underutilized due to its current use as "back of house" services or storage space. This area will most likely be used for new construction that is compatible with the existing historic buildings. For example, North Gate Road, which terminates on the North Gate of the stone fort, can be revamped to create a complete street scene. Existing street alignments will be preserved where possible, to preserve traditional alignments and simplify the phasing of new development. New street connections and street-oriented buildings could be added to transform this area into a mixed-use, pedestrian-friendly entrance to the historic fort. Mid-block areas could be used for parking to accommodate new uses for historic buildings within the moat, located within a short walk of this area. New streets should provide on-street parking, which will slow traffic and increase the walkability of streets, while offering additional parking options.

The Land Use Plan designates this area as "Mixed-Use / Workplace and Residential Focus". The design of this area should focus on creating "good addresses" – buildings set within a walkable urban framework that accommodate a variety of uses, including residential, office, commercial, civic, and lodging. Contributing historic structures in this area will be integrated seamlessly among new buildings. New buildings should define the edges of streets and civic spaces, while providing services (such as parking and loading) to the rear. All new construction, regardless of its eventual use, will reflect the scale and character of the historic urban fabric of Fort Monroe, and be limited to 2 to 3 ½ stories in height. The adaptability of the historic buildings to a variety of uses demonstrates the viability of using the Historic Village as precedent for the urban form of the North Gate area.

As the land use for this area of the Fort is rethought, attention will be given to amenities which need to be provided regardless of eventual land use. For example, neighborhood parks need to be provided as gathering spaces for residents, employees and visitors. The waterfront area of Mill Creek should be accessible to all, including a walking trail along the water's edge. There should be pedestrian connections throughout, including sidewalks along all streets and crosswalks that lead to main destinations, such as the stone fort and waterfront areas.

Figure 3.16. Concept for infill development in the North Gate area, in the form of walkable streets and blocks. Above, an analysis of pervious vs. impervious spaces; green is open and pervious space, outlined buildings are historic.

Figure 3.17. Illustrative plan depicting a detailed view of the concept for infill development in the North Gate area. The plan demonstrates proposed similarities between the street-oriented disposition and setbacks of new buildings in this area to those of the Historic Village.

0 100 200 400

Figure 3.18. Wherry Quarter aerial view, looking north

CONCEPTS AND LIMITS FOR REUSE OF THE WHERRY QUARTER:

- The land use plan divides this management zone into three areas. A small portion of the western edge is designated "Mixed-Use / Workplace and Residential Focus"; this area is the completion of the neighborhood formed in the North Gate area.
- To the north, along the waterfront, the land is designated as "Parks and Recreation", and is further described in the next section (Parks and Recreation Areas).
- The majority of the land within this zone has been designated "To be determined". Several options are being considered for the eventual land use and physical design of this area; before the FMFADA creates a final reuse concept, additional studies of economic impact, tourism facility needs, sea level rise, and infrastructure needs (among others) should first be completed. Regardless of final use, the land should be cleaned up to the level necessary to allow a variety of uses.

WHERRY QUARTER

The Wherry Quarter is the area northeast of the moat. It contains warehouse and service/ utility structures, surface parking, some areas of open space, and the Wherry housing units along the bayfront. The 1950's-era housing units were designed as low-cost housing for military personnel. The two-story brick structures are in a state of disrepair and were scheduled to be removed by the Army, but efforts were halted due to BRAC.

The land use plan divides this management zone into three areas. A small portion of the western edge is designated "Mixed-Use / Workplace and Residential Focus"; this area is the completion of the neighborhood formed in the North Gate area, and should follow the land use concepts and limits described for North Gate. To the north, along the waterfront, the land is designated as "Parks and Recreation", and is further described in the next section (Parks and Recreation Areas). The majority of the land within this zone has been designated "To be determined". Several options are being considered for the eventual land use and physical design of this area; before the FMFADA creates a final reuse concept, additional studies of economic impact, tourism facility needs, sea level rise, and infrastructure needs (among others) need to be completed. By focusing first on the reuse of existing buildings and selective infill development in other areas of the Fort, the FMFADA will be allowed ample time to evaluate options and make informed final decisions about the use of this

area. Regardless of final use, the land should be cleaned up to the level necessary to allow a variety of uses.

PARKS & RECREATION AREAS

On the northern end of the peninsula recreational areas are prevalent, offering expansive views to both Mill Creek and the Chesapeake Bay. The Endicott Batteries are located along the Bay shoreline. A seawall along the water's edge helps to protect the Fort from flooding and erosion, offering public access to the waterfront for residents and visitors. Dog Beach is located in the northern tip of the peninsula and provides a pristine beach environment with expansive sand dunes and beautiful views of the Chesapeake Bay.

The Land Use Plan designates this area as "Parks and Recreation". By concentrating development on the southern, already-settled portion of the Fort, this northern area is preserved as open or recreational space. The beach will expand with the implementation of a beach renourishment program and the waterfront will remain open and accessible to the public. A nature center and walking trails can be included adjacent to the sensitive wetlands and uplands. Walker Field, the former airstrip, can be reinvented as an open space. An amphitheater could be constructed within the great park to provide a place for residents and visitors to gather and enjoy a casual celebration or event.

The existing alignment of Fenwick Road will be substantially preserved with minor modifications to incorporate traffic calming features, such as median dividers, roundabouts, and slight bends in the road. These measures are intended to keep the area safe for pedestrians and cyclists. A northern connection to the Fort will be included to provide improved access to and from Buckroe and Fort Monroe, and to accommodate underground infrastructure upgrades. The exact alignment of this connection will be determined in collaboration with the City of Hampton. Parking for visitors of the historic resource and beaches will be provided in convenient locations, both on-street and in nearby surface parking lots. For larger events and increased visitors to Fort Monroe, an alternative parking solution will be explored (such as a trolley service from an off-site location that brings people onto Fort Monroe). Sustainable technologies should be utilized for parking areas, to minimize the ecological impact of these facilities. Continuous pedestrian trails will allow public access between parking areas and destinations such as beaches, park spaces, and natural areas.

The Parks and Recreation Area is divided into two sub areas. Parks and Recreation Area 1 (PR-1) is an area devoted to open space uses. It includes public beaches, preserved natural areas, recreation fields, walking trails, an existing RV park, and appropriate parking facilities. New construction will be limited in order to maintain the current and historic

Figure 3.19. Existing beaches at Fort Monroe

Figure 3.20. Aerial view, looking north, existing conditions

Figure 3.21. The natural setting along Mill Creek provides educational opportunities for visitors to learn about the Tidewater ecosystem.

CONCEPTS AND LIMITS FOR REUSE OF THE PARKS AND RECREATION AREA:

- The Land Use Plan designates this area as “Parks and Recreation”.
- A northern connection to the Fort will be included to provide improved access to and from Buckroe and Fort Monroe, as well as underground infrastructure upgrades.
- The existing alignment of Fenwick Road will be substantially preserved, with minor modifications to incorporate traffic calming features. These may include median dividers, traffic circles, and slight bends in the road.
- Parking for visitors will be provided in convenient locations, both on-street and in nearby surface parking lots.
- Parks and Recreation Area 1 (PR-1) is an area devoted to open space uses. It includes public beaches, preserved natural areas, recreation fields, walking trails, an existing RV park, and appropriate parking facilities. New construction will be limited in order to maintain the current and historic character of little permanent development and a more natural setting.
- Parks and Recreation Area 2 (PR-2)) is a part of the Wherry Quarter management zone; it is an area where the land and natural setting have been disturbed with development, including the Bay Breeze Community Center, the Endicott Batteries, and pre-existing northern portion of Wherry housing. New construction will be limited and be constructed within the same general geographic area of disturbance as previous development. The use and function of any new development will support the adjacent open space uses.

character of little permanent development and a more natural setting. Parks and Recreation Area 2 (PR-2) is a part of the Wherry Quarter management zone; it features open lands, existing buildings, and areas where buildings were once located. Existing buildings include the Bay Breeze Community Center and several of the Endicott Batteries. Areas where buildings once were include the area south of the Bay Breeze Community Center where the northern portion of Wherry housing was once located. The batteries are contributing historic structures and will be preserved and potentially reused; further analysis of this reuse possibility is necessary. The existing Bay Breeze Community Center, a non-contributing building, can remain or be redeveloped. New construction will be limited and conform to the same general geographic area of disturbance as previous development; new buildings will support the adjacent open space uses.

economic impact strategy 4

The Economic Impact Strategy was prepared by Bay Area Economics, in collaboration with H. Blount Hunter Retail & Real Estate Research and Zimmerman/ Volk Associates, Inc.

Fort Monroe employs 4,051 military personnel, civilian employees, and contractors.[1] The closure of Fort Monroe will result in a relocation of personnel to local and non-local facilities not later than 2011. Two-thirds of the positions currently at Fort Monroe will likely remain in the Hampton Roads region including more than one-half moving to Fort Eustis 18 miles away. Programmed realignment actions include:

- Relocation of 2,217 personnel to Fort Eustis in FY 2011;
- Discretionary moves of 634 personnel, most likely within the region;
- Transfer of 388 personnel to Fort Knox in Kentucky in FY 2010; and
- Elimination of 462 jobs held primarily by civilians in FY 2011.

Potential economic impacts of those moves include jobs, taxes to the City of Hampton, retail sales and housing values.

- Those individuals who lose their jobs will feel a direct and difficult impact.
- Cutbacks in local Federal spending as a result of Fort Monroe closure will lead to losses of "spin-off" jobs elsewhere in the economy. However, in this case, most of the jobs are being moved within the region with the real job loss limited to 850 personnel and a portion of the private-sector jobs supported by the Fort Monroe local expenditures reduced as a result of the base closure.
- As a result of Fort Monroe's presence, the Federal government will discontinue the annual payments to the Hampton School District that help offset the cost of educating children of Federal employees, particularly those that live on tax-exempt land.
- With a move 18 miles north on I-64, it is unlikely that civilians and military personnel that own homes in or near Hampton will relocate in the short term. The few homes sold by employees that move to be closer to Fort Eustis could affect the local Hampton housing market in the year before and after closure, but they are unlikely to have substantial long-term impacts on property values.

Clearly, one imperative in planning Fort Monroe reuse is to attract new jobs and resident customers to replace those lost to BRAC. Filling even one-half of the vacated office space on Fort Monroe would more than replace the jobs lost from the region due to closure. Several of the jobs associated with the physical plant operation and maintenance will continue but as non-Federal positions. Additional short-term jobs will be created by environmental remediation and building rehab and upgrades. Attraction of civilians to Fort Monroe housing may largely offset the local impact of losing military families as patrons of local stores and restaurants. Given the military personnel's access to commissaries and Post Exchanges, their spending in local stores likely has been somewhat limited.

One of the more difficult economic impacts will be the transfer of responsibility for upgrading and maintaining Fort Monroe's extensive stock of historic structures as well as its seawall, open space and non-historic buildings. Many of the transferred buildings will require capital improvements to provide access for the disabled and to meet all local health and safety codes before they can be reused for private purposes. Additional analysis will be undertaken to refine the cost estimates for upgrading and maintaining Fort Monroe's infrastructure and those buildings likely to remain in long-term public use. It is important to note that no agreement has yet been negotiated between the Fort Monroe FADA and the City of Hampton regarding the City's role in providing any operation and maintenance or services to the Fort, and any such agreement should identify revenue sources to offset the financial impact of bringing these O&M costs and services into the City's systems.

[1] *Fort Monroe BRAC Planning, 20 April 2006 Robert Edwards/IMNE-RMO 11*

MARKET POTENTIALS

A key principle in Fort Monroe reuse planning is that the reuse should be economically self-sustaining, avoiding financial burdens on the Commonwealth of Virginia or on the City of Hampton. The market analysis helps to identify and quantify those opportunities.

Unlike many military bases in more isolated and economically depressed locations, Fort Monroe offers many important opportunities for reuse of historic buildings, valuable waterfront land and other building resources. This reuse could generate funding for required capital improvements to the infrastructure and buildings as well as long-term operations and maintenance costs associated with stewardship of Fort Monroe's historic assets and natural environment. Reuse of historic buildings will generate lease revenues from leases and/or from sale of leaseholds (i.e., an up-front payment for the right to occupy a house or building for 50 or more years), particularly housing that can attract households to take advantage of the beauty and heritage of Fort Monroe. Additional revenues will be generated by reuse of non-residential buildings for office, hospitality and retail uses.

Housing

- Fort Monroe holds the potential to become a development of national importance, attracting future residents from well beyond Hampton Roads to lease year-round and second/vacation homes.

- Providing a variety of housing types will allow Fort Monroe to attract a variety of new residents. The target mix derived from the propensities of market area households to rent year-round and second/vacation homes includes:

  – 47 percent empty nesters and retirees,
  – 25 percent traditional and non-traditional families, and
  – 28 percent younger single- and two-person households.

- Figure 4.1 identifies initial estimates of supportable rents or prices for the range of housing types supportable at Fort Monroe (leasehold fees for leases of 50 or more years are estimated at 90 percent of potential sales prices).

- Absorption of new and rehabilitated units is projected to average 209 units per year.

Office

- Fort Monroe is not a traditional location that would be sought by all office-using tenants. It does not offer the easy highway access, proximity to major employment centers and modern office space that most of the region's business parks provide.

- Office space absorption fluctuates from year to year in the Peninsula office market. While the Peninsula office market is not subject to predictable annual demand for space, the addition of 200,000 to 300,000 square feet of new space per year is a realistic market expectation based upon past trends. Fort Monroe could compete to attract a share of that demand, but it may take several years to reuse and fill buildings.

Figure 4.1: Target Residential Mix
New year-Round and Second-Vacation Housing Units at Fort Monroe

Housing Type	Base Rents/ Prices
Multi-family for-rent *(lofts/apartments, lease)*	$750 to $1,400 per month
Multi-family condo / co-op *(leasehold ownership)*	$225,000 to $1,000,000
Single-family attached *(duplexes, quad-plexes, leasehold ownership)*	$475,000 to $875,000
Urban single-family detached *(detached houses, leasehold ownership)*	$725,000 to $1,150,000

SOURCE: Zimmerman/Volk Associates, Inc., 2006, amended 2008.

- Existing buildings can be converted to office space. However, the fact that many of the buildings were converted from historic barracks, cottages and other housing means that they do not offer the typical office space layouts and features that some users may prefer or require. Existing office space will require upgrades to meet the needs of the private market. Some small office buildings can be expected to attract local businesses such as accountants, attorneys, architects, and other professionals seeking the opportunity to live near their work in a high-amenity location.

- The potential for larger tenants lies primarily in recruiting one or more specialized office users. Larger buildings or new space can be constructed for corporate users or specialized tenants such as research & development firms. Specialized users may exist for historic structures and for larger spaces that have been outfitted by the military with advanced technology wiring and internal systems. An extensive recruitment plan may be required to solicit appropriate tenants.

  Existing buildings offer 516,622 square feet of space that can be converted to offices, though office may not be their highest and best use of all this space. Using only the TRADOC complex and the cluster of buildings at North Gate and Patch Road (Buildings 56, 57, 59, and 135) would create enough office space to replace existing jobs that will be lost to closure. These buildings will require significant renovation and infrastructure enhancements to make them suitable for private tenant use.

- Building 5 could be reused as a museum, but it also has potential for a variety of non-traditional uses that might result in the creation of a world-class asset or institution limited only by the imagination of community leaders:

  - a high-profile "think tank" or public policy institute created by a consortium of national and local educational institutions;
  - a residential conference center aligned with one or more local universities;
  - an executive training center/meeting facility;
  - an "honors campus" or off-campus extension of a local college or university;
  - a campus for a new college;
  - a specialized research center (medicine, engineering, applied sciences);
  - a site for a major maritime research center or oceanographic institute;
  - a year-round retreat similar to the Chautauqua Institution;
  - an artists' colony with live/work facilities and public display areas;
  - the headquarters of one or more major non-profit organizations or charitable foundations; or
  - a magnet school or Governor's School for performing arts and science.

Retail

- Fort Monroe is not a suitable site for substantial retail development (e.g., big box retailers) requiring regional customer support. The site is too isolated from significant clusters of resident consumers, it is accessed by low-capacity neighborhood streets rather than major arterial highways, and it is too close to competitive retail in the Coliseum Central node.

- Rather, Fort Monroe can attract a small contingent of niche retailers that see an opportunity to serve a very desirable residential neighborhood. Restaurateurs with destination drawing power will be attracted in the near term to signature sites offering waterfront settings and views of the Hampton Roads harbor and Chesapeake Bay.

- "Retailing follows rooftops," so merchants are likely to respond to site opportunities at Fort Monroe only once a consumer base emerges through development of housing, offices, and visitor destinations. Major destination restaurants are an exception

to this rule and will seek out Fort Monroe sites prior to the development of a neighborhood retail consumer base.

- Fort Monroe's retail strategy will optimally center upon the development of "village-scale" retailing as an amenity for residents as well as employees and visitors. Retail development at Fort Monroe can contribute to pricing premiums for residential units and contribute to quality of life by providing daily needs within walking distance (or a short drive) of residents.

- Creating two small clusters of mercantile activity each merchandised to meet the needs of 500 to 1,000 households and nearby offices would encourage pedestrian access by residents and workers. The redevelopment could support 7,500 to 12,000 square feet of retail space with limited new housing beyond reuse of existing structures.

- Establishing a centrally located "village center" shopping district offering a greater variety of convenience goods, personal services, and casual dining options should be encouraged as warranted by density of residents, employees, and tourists. With more expansive development of new housing, tourism and recreation uses, a small village center could be supported once extensive leasing and development provide the potential customers.

Lodging

- Lodging can be a part of Fort Monroe's future, taking advantage of the water location and the important historic resources.

- Hampton does not offer beach-oriented hotels, which may be appropriate for consideration at Fort Monroe. Development could include a variety of facilities:
  - one or more independently-owned bed & breakfast inns;
  - one or more small cottage-style hotels such as the Sanderling Inn in Duck, NC; and/or
  - a spa/resort oriented to the beach and/or boating.

- Section 5 discusses options for transforming Fort Monroe into a greater tourist destination, building on its historic importance and natural beauty.

Figure 4.2. Building 5 has a wide range of possibilities for reuse.

Figure 4.3. Waterfront settings provide opportunities for new restaurants on signature sites.

Figure 4.4. Reuse of existing housing can attract households to take advantage of the beauty and heritage of Fort Monroe.

Figure 4.5. View of historic housing along the moat; the existing water tower is visible in the background.

Figure 4.6. Existing infrastructure, such as streets and sidewalks, will need to continue to be maintained.

Figure 4.7. Private users will be responsible for maintaining many of the existing buildings.

FUTURE FINANCIAL PERFORMANCE AND FISCAL IMPACTS

Critical to the long-term success of Fort Monroe reuse is the need to be financially self-sufficient. Based on preliminary analysis of individual line items in the potential operations and maintenance (O&M) budget, between $3.9 and $4.4 million will be needed annually to care for public infrastructure and parks and open space. Analysis will continue to further refine these cost estimates in concert with the City of Hampton as more information becomes available about infrastructure conditions and other factors impacting service costs. Additional costs to operate the FMFADA and pay leasing and management fees will be incurred as reuse proceeds; they are discussed in the financial analysis portion of this report.

The public responsibility and cost of maintenance will be reduced by assigning private users with the responsibility for maintaining many of the buildings. The Fort Monroe management entity will receive lease revenues from reuse of many buildings and sites for private uses. The City of Hampton will receive real property, sales, food/beverage and hotel tax revenues from new development and reuse of historic and other buildings as well as fees for specific services. It is important to note that no agreement has yet been negotiated between the Fort Monroe FADA and the City of Hampton regarding the City's role in providing any operation and maintenance or services to the Fort, and any such agreement should identify revenue sources to offset the financial impact of bringing these O&M costs and services into the City's systems.

Potential partnerships between the management entity and the City will be explored to address short-term and mid-term O&M and capital improvement costs.

Additional costs will be incurred to operate and maintain the historic buildings within the moat that are designated for public uses. At this early stage in concept development for the museums and other public uses, those costs have not yet been estimated.

FMFADA and the City of Hampton will work together closely to make appropriate arrangements for operation and maintenance of Fort Monroe's infrastructure in a manner that mitigates the City's risk of unforeseen and unfunded infrastructure capital requirements and operating costs. No agreement has been negotiated yet.

Financial Performance

The FMFADA will generate revenue primarily from leasing historic structures and land for new development:

- An Interim Leasing Program could generate early income to funds operations while keeping buildings in operation and avoiding physical deterioration that could result in higher rehabilitation costs in the future.

- In keeping with the FMFADA policy of not selling its assets, a Pre-Paid Leasehold Program could transfer use and responsibility for structures for a period of 50 to 75 years. Instead of purchasing a home, buyers would purchase the right to lease the home for, say, 75 years and would possess most of the rights and responsibilities of homeownership without technically owning the property. On-going maintenance and improvements to the homes would be the responsibility of the leaseholder.

- FMFADA also could enter into ground leases with one or more third-party developers for adaptive rehabilitation of historic structures as well as new construction in the Entry Gate, North Gate and Historic Village planning areas. Land values will reflect the ultimate value of the new development after adjustments for infrastructure requirements and environmental remediation.

Preliminary analysis estimates capital costs at approximately $40 million, comprised of infrastructure improvements, building improvements, and other miscellaneous projects. Fort Monroe's infrastructure requirements are less than would be expected for a military facility of this age and size because the U.S. Army invested $88.4 million in rebuilding systems after Hurricane Isabel hit in 2003. An important element – the electrical power distribution system – is not included in this analysis. The cost of any required system upgrades is not known nor is the degree to which such costs could be financed by rate-payers.

To implement its Interim Leasing Program and Pre-Paid Residential Leasehold Program, the FMFADA will need to make initial investments in existing buildings to ensure their marketability. These improvements are limited to cosmetic treatments such as exterior and interior repainting as needed, carpet cleaning/replacement, acoustic tile replacement, window washing, selected appliance replacements, and life-safety signage. Any major rehabilitation or upgrades of existing structures would be made by one or more third-party developers.

On-going operating costs, estimated at roughly $6 million per year, will include:

- FMFADA expenses for personnel, contract services and marketing;
- O&M costs for public infrastructure, parks and open space;
- costs of maintaining buildings retained for public use or not yet transferred under long-term ground leases; and
- leasing/asset management fees paid to third-party developers and property managers.

The financial analysis reflects reasonable expectations about the pace of future absorption and development and the associated revenues. However, these cost and revenue projections are still preliminary and will change as more information becomes available.

Summary of Preliminary Findings

Overall, the financial model indicates that Fort Monroe can become financially self-sustaining with sufficient funds to cover its own operating costs and fund capital projects. A key assumption is the successful launch of a Pre-Paid Residential Leasehold Program and the leasehold value received and timing of sales. The projections of the financial model will change over time as more information becomes available. The projections are intended to provide a sense of scale as to the potential costs and revenues based on current conditions. The model is designed to accommodate changes in key assumptions and to test the sensitivity to different possible future events.

tourism strategy 5

HISTORY OF OLD POINT COMFORT AS A RESORT DESTINATION

Old Point Comfort's seaside location has been the site for several of America's leading resort hotels. In the early to mid 1800s salt water bathing, as well as salty bay air, was believed to have revitalizing and health restorative properties.

Many grand hotels were built on Old Point Comfort in the 1800s, making it the leading resort in the south. The first of these hotels was the luxurious Hygeia Hotel, named for the Greek goddess of health. Built in 1822, the hotel was used primarily to house the workmen engaged in the construction of Fort Monroe. Described as "large and commodious" the Hygeia Hotel became a popular rendezvous for Senator Henry Clay, President John Tyler, Edgar Allan Poe and other leading figures of the day until its demolition during the Civil War. With steamboat and railroad connections, Old Point Comfort was a destination of choice for travelers.

Reconstruction of the Hygeia began in 1866, built to accommodate over 1,000 guests. When Harrison Phoebus assumed ownership in 1872, it was called the "Great Southern Resort." The Hygeia Hotel welcomed prominent guests from around the world, including King David Kalakaua of Hawaii. Many guests arrived by steamboat from throughout the South to enjoy the "health-giving wonders of Old Point Comfort." The Hygeia was eventually destroyed by order of the U.S. Army in 1903. In 1896 the $5 million Chamberlin Hotel opened featuring electric lighting and rooms with private baths. Tragically, this grand structure was razed by fire in 1920. In 1928, the second Chamberlin Hotel was completed and offered an array of amenities including an indoor saltwater pool. The Chamberlin Hotel remains an enduring landmark representative of Old Point Comfort's long history as a resort destination.

The majestic hotels on Old Point Comfort helped to spur tourism development and other resorts in the Hampton Roads region, including tourist destinations at Phoebus, Buckroe, Norfolk, and Virginia Beach.

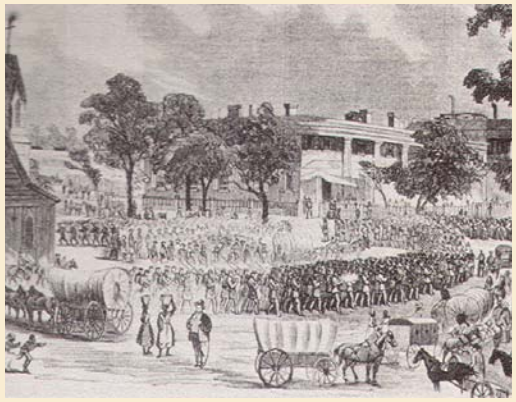


Figure 5.1. Hygeia Hotel, 1862

Figure 5.2. Chamberlin Hotel, 1880s

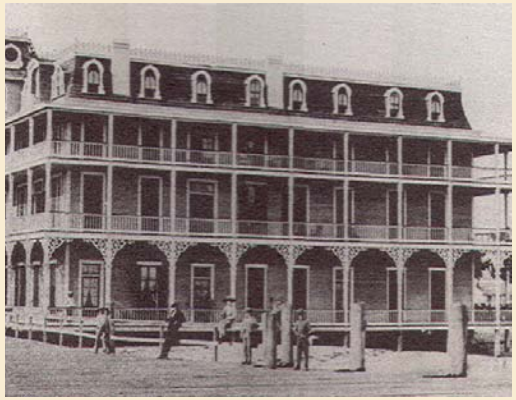


Figure 5.3. The Second Hygeia Hotel, 1873

Figure 5.4. Chamberlin Hotel, pre-1920s

Figure 5.5. The expanded, four-story Hygeia Hotel

Figure 5.6. Chamberlin Hotel, 2006

The Tourism Strategy was prepared by Economic Research Associates (ERA) of Washington, D.C. The following is a summary; additional materials can be found in The Technical Support Manual for the Reuse of Fort Monroe. Prior to the start of Economic Research Associates' analysis, the Fort Monroe Federal Area Development Authority formed a Tourism Advisory Group to examine the potential for heritage and beach tourism at Fort Monroe. Members of the Fort Monroe Tourism Advisory Group are:

Sallie Grant-DiVenuti, Hampton Convention and Visitors Bureau
Jim Ricketts, VA Beach Convention & Visitors Bureau
Phyllis Terrell, Colonial Williamsburg Foundation
Shawn Hash, Owner/Operator, Tangent Outfitters
Jack Berry, Richmond Convention & Visitors Bureau
Chris Canfield, Virginia Tourism Corporation
Steve Galyean, Virginia Tourism Corporation
Alisa Bailey, Virginia Tourism Corporation

This section reviews existing visitor attendance and lodging patterns, and data on heritage tourism, resort tourism, and general waterfront recreational activities. ERA collected and analyzed data on a number of recreational and historical uses. Research addressed elements affecting visitor expenditures and destinations including visitor characteristics, visitor origin, purpose of trip, length of stay, and mode of transport.

TOURISM MARKET OVERVIEW

According to the Virginia Tourism Corporation, Virginia tourism in 2007 totaled 35,000,000 visitors, the same as 2003-2004, reflecting a non-growth trend.

- Average party size is one to two persons, suggesting more travelers without children.

- 78% are overnight visitors; 57% utilized hotel/ motel accommodations

National Parks

- Total attendance at the 11 parks within 200 miles of Fort Monroe in 2007 was 7,845,605 persons; visitation is seasonal, with numbers spiking during the summer months. The most heavily visited site is the Colonial National Historic Park, encompassing Historic Jamestown, Yorktown Battlefield and Cape Henry Memorial. Visitation trends show that historic sites and battlefields have the highest total visitation throughout the year.

- There are three wildlife/wilderness sites administered by the National Parks Service within 200 miles of Fort Monroe. Common activities at these sites are fishing, swimming, boating, camping, horseback riding, shelling, and ranger-led programs. These sites offer free admission but include many pay-as-you-go activities ranging in price from $10-$16 per person, and achieve annual visitation between 860,000 and 2.2 million.

- Military parks commemorate the sites of major civil war battles. Activities at these sites include guided tours and hiking. These sites typically have a visitor's center, offer free admission, and achieve annual visitation between 500,000 and 1.6 million.

- Military history attractions are the least popular attractions with annual visitation ranging between 85,000 and 380,000. These sites are restored forts offering a glimpse into the area's past. The sites achieving the highest visitation have been carefully restored, offer strong programming and natural amenities.

Local Hotel Market

- Based on data provided by the Hampton Convention and Visitors Bureau (CVB), The City of Hampton contains 3,151 hotel rooms. Approximately 36 percent are full-service properties with adequate meeting space.

- Hampton hotel occupancy in 2007 averaged 58.1 percent with an average daily rate of $73.89. By comparison, the reported statewide average room rate in 2007 was $97.45 and the occupancy rate averaged 59.6 percent.

- Annual occupancy rates declined between 2002 and 2007, decreasing from 66 percent to 58.1 percent (2007). Hotel occu-

pancy is seasonal, with almost 31 percent of 2007 roomnight demand experienced in June, July, and August.

- In 2007, almost 40 percent of Hampton visitors were there for pleasure, almost 20 percent of visitors were there for work and an additional 22 percent came for a meeting or a convention. 25 percent of 2007 Hampton visitors were from Virginia.

- By comparison with the competitive facilities, Hampton's traditional focus on more budget oriented properties has kept average room rates low, influenced by the government per diem rates for the defense-related visitor market and limited available amenities.

Regional Resort Comparables

- ERA examined seven comparable resort properties: The Tides Inn, Virginia Crossing, Boar's Head Inn, Crowne Plaza Williamsburg at Ft. Magruder, Kingsmill Resort and Spa, Keswick Hall, and The Sanderling Resort on the Outer Banks of North Carolina. Average daily rates and annual occupancy levels outpaced the Hampton market in 2007.

- Because of its long-time focus on budget and military-oriented lodging, the Hampton area lacks a beachfront resort hotel of the type and scale exhibited in these comparable resort properties.

- The market for resort properties is seasonal, with one-third of 2007 room night demand in June, July, and August and room revenue almost four times as high in July/ August than in December, January, and February.

Marina

- There are 27 marinas within a 30-minute drive of Fort Monroe.

- Approximately half of the marinas maintain a wait list for slips. Pent up demand is concentrated in either the newer modern marinas, or for larger slips for boats over 40 feet.

- Current slip demand patterns suggest that amenities and services will be important facility attributes.

- Average per night slip rental rates are between $1.35-1.85 per foot. Average long-term slip rental rates range from $6.25 to $8.00 per foot per month. Marinas that offer semi-annual rates range from $8.50 to $10 per foot per month. Month to month rates vary between from $7.70 to $15.00 per foot per month.

Recreational Vehicles and Campground

The market for RV facilities at Fort Monroe is opportunistic, but the size of the existing facility — 14 spaces — cannot support the level of amenities that generate premium rates. Prior to the BRAC decision, the Army formulated a plan to more than double the existing facility. Infrastructure is already in place to accommodate a larger and more upscale park.

- The average nightly cost at trailer parks near Richmond is $24.50.

- Some parks charge premiums depending on the season or view.

- Most parks have a swimming amenity.

Key Findings

ERA's research indicates that there is tourism potential for Fort Monroe based on two complementary, but different site characteristics:

- The extraordinary historical significance of the site to a range of submarkets – military historians, African American visitors, and preservationists who will be drawn by the Fort's military compound, connection with slavery, and historic structures.

- The appeal to recreation and resort visitors: 3.2 miles of beach and seawall, the open space between the bay and the harbor, the Recreation Center, marina and RV grounds.

Estimated visitation includes between 100,000 to 150,000 persons per year for cultural attractions and 115,000 to 125,000 annual beach visitors, totaling 225,000 and 275,000 persons per year. These visitors will likely follow the seasonality patterns that cluster the

greater majority of visitations within the three summer months and two shoulder months.

To increase total visitation, the Fort's historic/military and cultural attractions should be linked to a packaged visitor experience incorporating existing historic destinations such as Jamestown, Yorktown and Williamsburg and positioned as complementary to these places. ERA notes that visitation at historic sites nationwide is declining, despite the stated preference for these types of sites among aging Baby Boomers and other select audiences.

ERA's experience suggests that when niche markets (African American history groups, military history, etc.) become a focus of marketing and interpretation, the market responds favorably, but the numbers attracted will be highly dependent upon the quality, pricing and duration of the visitor experience created.

Resort Potential

There is also qualified potential in the resort hotel market for the Fort Monroe site. If focal markets are identified and a 'branded hotel' can be attracted to the site, a minimum of 130-150 rooms will be required, but will also bring the advantage of a national reservations system and a chain-affiliated company's marketing strength.

Conclusion

The overall conclusion about tourism potential at Fort Monroe is that a market exists for development of tourist and visitor destination facilities, but, at this time, the core market is regional, not national or international; it is automobile-oriented, is more price-sensitive than the area's existing destination resort visitors, and is seasonal in nature with visitation peaking in summer months.

MARKETING FORT MONROE: INTERPRETATION AND SUSTAINABILITY

In addition to analysis of alternatives for management and development, the most appropriate marketing strategies for the project have been evaluated. The marketing plan for Fort Monroe will be affected by several factors:

- The phasing and timing of redevelopment and integration of new elements – for example, if the Museum cluster 'inside the moat' will require 7-10 years to develop, this element should not be marketed heavily until the year before it opens. Incremental cultural attractions can be marketed much earlier in the process. The recreational aspects of the site can be marketed more quickly and be used to position Fort Monroe as a leisure waterfront destination while the cultural attractions are being enhanced and developed. Accessibility to the site can be rapidly enhanced once the recreational components are established.
- The opportunity to form a Cultural Attraction Cooperative Agreement with other area historical and cultural attractions that will draw cultural visitors to the greater Hampton Roads area. A joint effort should be structured to attract new visitors and to extend the stay of existing visitors. This can be accomplished by expanding the marketing focus of the "History Triangle" to become "America's History Quadrangle" that would include new Fort Monroe cultural destinations. This regional/national/international joint marketing arrangement will require a clear understanding about how to expand the campaign strategy as well as an agreement on how to fund it among the partners.
- The Fort Monroe Hotel will also affect how the site is marketed. In ERA's view, the Fort will be more generally accessible and enjoys spectacular views of the Bay, but will need an aggressive market positioning strategy and the financial capacity and name recognition of a branded hotel to make the greatest impact and generate revenues for FMFADA. However, introduction of a branded location should not be implemented in a cookie-cutter manner from a design perspective. The new hotel should be designed and built at a scale that might recall the exterior character of the Hygeia Hotel, incorporating state of the art amenities on the interiors. The resort component can be tied to access to the

beach, the marina and a system of walking and biking paths throughout the site, complemented by spa services and other resort amenities.

- The potential for ongoing funding for a strategic marketing program will affect the scope, reach and targeted audience programs that will sustain Fort Monroe as a destination. A comprehensive marketing effort should position Fort Monroe as a major addition to the Hampton Roads area. This can involve the Virginia Tourism Corporation as well as specific interest donors who might support events, special exhibits or other programming. A comprehensive approach to interpreting Fort Monroe's history should also appeal to foundations, whose impact could include funding/ marketing of educational programming and underwriting travel/ transportation costs for school visits. Connections with area/ state universities through scholarly research and development of educational materials can provide content for marketing, but not require full funding by FMFADA.

- It is recommended that a budget line item be included for ongoing marketing of the site. Typically 3-5 % of the total operating budget should be dedicated to marketing costs.

A marketing strategy for FMFADA and Fort Monroe should be structured to appeal to a diverse audience and different income levels.

FORT MONROE DEVELOPMENT OPTIONS

The FMFADA has several options regarding the management and development of heritage and recreational tourism components at Fort Monroe. The following text outlines the many management, leasing, or sale options available to the organization for the tourism components of Fort Monroe. ERA understands that the board is considering development of a non-profit organization under which some components could be managed and developed, and would be used to provide fund raising to support public programs.

Concessions Management

- Pros: Highly experienced, efficient, well-funded, easily obtain necessary financing, steady franchise fee income stream
- Cons: Institutional, high overhead, will limit control, may be hesitant to take on non-revenue producing components

Direct Management

- Pros: Maintain complete control, cohesive plan, strong revenue potential
- Cons: Require high capital investment from FMFADA, may be difficult to obtain financing/ funding, lack experience in management of hospitality operations, take on complete project risk

Ground Lease

- Pros: Steady rental income stream, maintain ownership of sites, no capital investment requirement, long-term value enhancement
- Cons: Limited development control, can be difficult to finance, may lack cohesion with introduction of sub-leasing and various management agreements for separate components

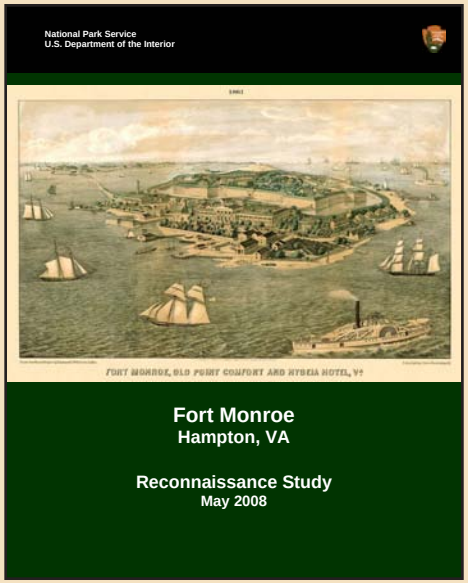
Direct Sale

- Pros: Large immediate capital income to fund non-profit initiatives
- Cons: Complete release of control, lack of cohesion, no long term income potential; will not address long term guarantees for quality and protection

National Park Service

- Pros: Will ease linkage to "America's Historic Triangle"; guarantees some government funding, maintains site cohesion, guarantees site's protection in perpetuity; NPS is a 'brand"
- Cons: Bureaucratic, under-funded, restricted income potential, tax exemption limits fiscal and economic benefits for surrounding community; lease terms limit use of historic tax credits.

NATIONAL PARK SERVICE'S "RECONNAISSANCE STUDY"



The National Park Service's "Reconnaissance Study" of historic Fort Monroe was the first step to determine whether the Fort should be more extensively evaluated for possible inclusion in the National Park System after the Army vacates the base in 2011 and the property reverts to state ownership.

This reconnaissance study, conducted by the Northeast Region of the National Park Service (NPS), contains the analysis and findings of the likelihood of Fort Monroe's resources meeting Special Resource Study criteria for designation as a unit of the National Park System. The study was undertaken by an interdisciplinary team of NPS personnel representing the fields of park management and maintenance, history, curatorial services, architectural history and park planning.

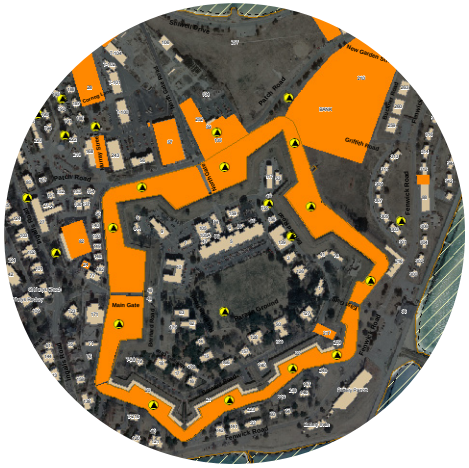
The conclusions of the study indicate that the resources of Fort Monroe are likely to meet the criteria for national significance and suitability as a potential unit of the National Park System should a Special Resource Study be authorized by Congress. These resources enjoy a high degree of integrity due to the continuous stewardship of the United States Army.

Because of cost and a number of other factors, including the current lack of knowledge regarding future uses of the Fort's resources, the study concludes that it is unlikely that a Special Resource Study would find the entire resource base of Fort Monroe feasible for NPS designation. Even the Fort itself, the area surrounded by a moat, is not likely feasible without a strong and financially sustainable partner to contribute to the costs of managing, maintaining and operating its historic structures and landscapes. The study also concludes that until such time as the Reuse Plan for Fort Monroe is approved by the Department of Defense, and the administrative structure and its authorities for implementation of the plan are known, the need for NPS management cannot be determined.

This study, therefore, recommends that Congress defer any authorization of a Special Resource Study until the NPS can review the Department of Defense approved Fort Monroe Reuse Plan to determine if any potential role for the NPS is likely to meet the feasibility criterion. This review would also permit the NPS, based on the provisions of the plan and the administrative mechanisms for its implementation, to determine if a Special Resource Study is likely or unlikely to find that there is need for NPS management of some portion of the Fort's resources. Any potential role for the NPS would need to be considered in light of the Commonwealth of Virginia's taking on the ownership of resources associated with Fort Monroe after the Fort has been vacated by the United States Army. At the conclusion of the BRAC closure process for Fort Monroe, virtually all of its nationally significant resources will revert to the Commonwealth of Virginia.

In the interim, the NPS will offer to provide technical assistance under existing authorities to the FMFADA to assist that agency in devising plans for the historic preservation of the Fort's resources and for the development of an Interpretive and Educational Master Plan defining programs, visitor services and visitor experiences that promote public understanding and appreciation of those resources and the rich history of Fort Monroe. Such assistance does not presume that the NPS will own, operate, manage or provide interpretive services at the Fort in the future.

This information was drawn from the Reconnaissance Study of Fort Monroe in Hampton, Virginia conducted by the Northeast Region of the National Park Service, May 2008, Executive Summary. The study can be reviewed in its entirety at www.FMFADA.com.



environmental considerations 6

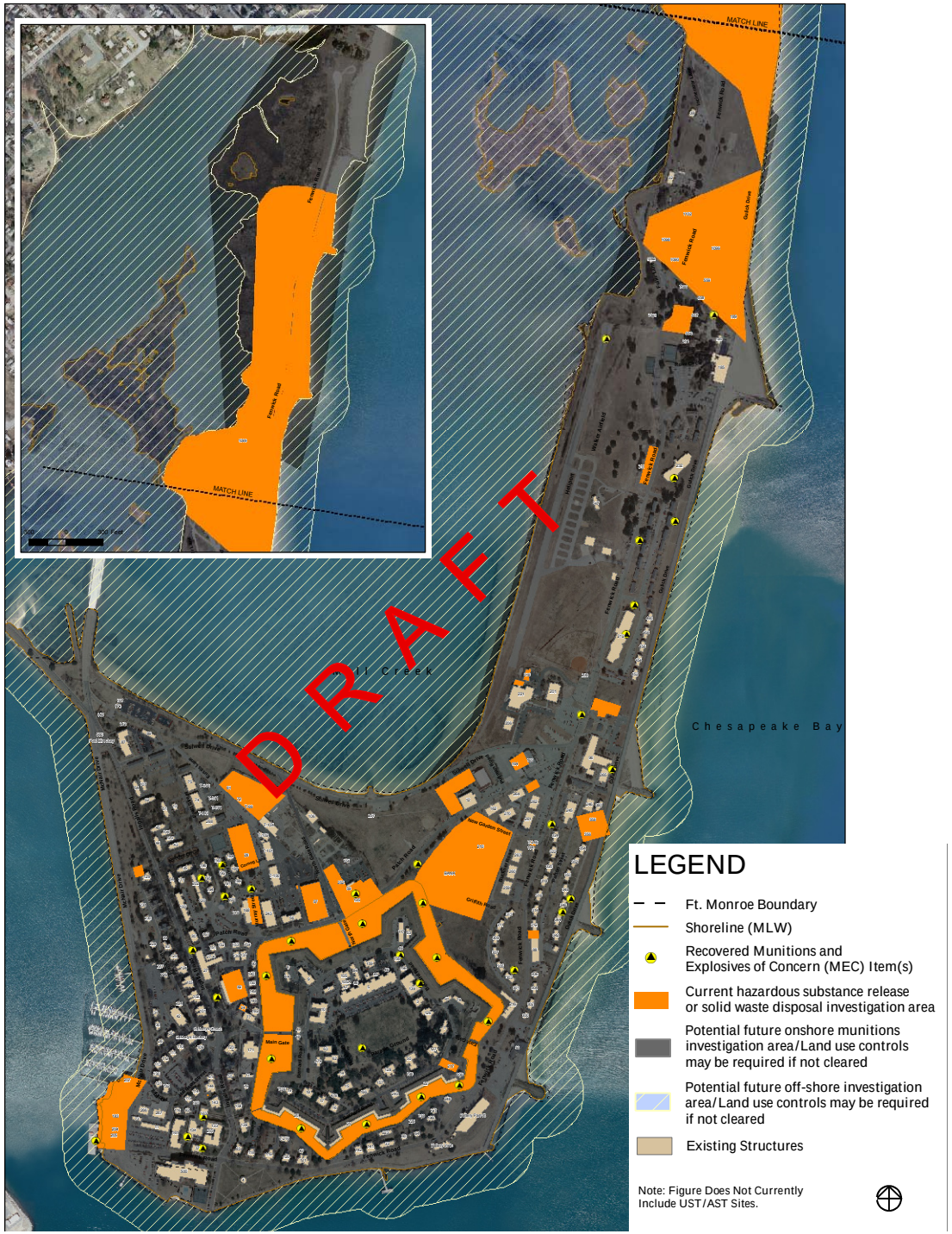


Figure 6.1. Known and potential environmental concerns related to reuse

The Environmental Considerations analysis was prepared by Matrix Design Group, Inc. The following section summarizes conditions related to the investigation and cleanup of environmental contamination in soil, sediment, groundwater, surface water, and buildings at Fort Monroe which has the potential to affect redevelopment. A brief discussion of the actions currently underway to address known and potential environmental contamination is also provided. A detailed environmental analysis, on which this summary is based, is available in The Technical Support Manual for the Reuse of Fort Monroe.

BACKGROUND AND REGULATORY STATUS

From 1834 until the early 1970s, Fort Monroe was used as a coastal defense fort and coastal artillery school. Training and industrial support operations there during more than 150 years of operation generated hazardous substances, excess munitions and explosives of concern (MEC), and other wastes of environmental concern.

The U.S. Army, in consultation with the Virginia Department of Environmental Quality (VDEQ), is currently conducting an investigation of known and potential environmental contamination in soil, sediment, groundwater, and surface water from historical hazardous substance spills and waste disposal activities at Fort Monroe. This work is being conducted in accordance with the requirements of the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), National Contingency Plan (NCP), and Subtitle I of the Resource Conservation and Recovery Act (RCRA).

The Base Closure & Realignment Acts of 1988 and 1990 provide a number of specific legal requirements that must be met when a military base is closed and transferred to a different owner, such as the Fort Monroe Federal Area Development Authority (FMFADA). Specifically, the U.S. Army is responsible for paying for the investigation and cleanup of environmental contamination in soil, sediment, groundwater and surface water necessary to protect human health and the environment.

KNOWN AND POTENTIAL ENVIRONMENTAL CONTAMINATION CONCERNS

A review of historical literature and environmental investigative reports available for Fort Monroe indicates that environmental contamination concerns exist which have the potential to affect redevelopment. Known and potential concerns include:

- Munitions releases and disposal
- Hazardous substance releases and solid waste disposal
- Petroleum hydrocarbon releases
- Asbestos, lead-based paint, and other hazardous materials in buildings

A figure depicting the areas of known and potential environmental contamination concerns related to redevelopment is provided as Figure 6.1.

MEC Releases and Disposal

Munitions and explosives of concern (MEC), including but not limited to cannonballs, Parrott shells and mortars, were used at Fort Monroe from the Civil War through World War II. Buried MEC have been encountered onshore and offshore, including in the moat.

Hazardous Substance Releases and Solid Waste Disposal

Hazardous substance releases from light industrial operations, including but not limited to boat maintenance facilities, photo labs, maintenance shops, pesticides mixing areas, and a railroad line may have resulted in environmental contamination in soil, sediment, groundwater, and/or surface water at Fort Monroe. Lead contamination may also be present in soil at several former firing ranges. Several landfills, the most recent of which ceased accepting waste in the mid-1950s, and two incinerators also operated at Fort Monroe. Disposal of solid waste from these operations may have caused environmental contamination in soil, groundwater, sediment, and/or surface water at the Site.

Petroleum Hydrocarbon Releases

More than 200 underground and aboveground storage tanks were historically present on Fort Monroe. Products stored in these tanks included heating oil, gasoline, diesel, and used oil. Petroleum hydrocarbon releases have been documented at various locations throughout the installation.

Figure 6.2. Groundwater sampling

Figure 6.3. Groundwater sampling

Figure 6.4. Soil sampling at former target range

Asbestos, Lead-Based Paint, & Other Hazardous Materials in Buildings

Due to the age of the buildings at Fort Monroe, a significant amount of asbestos and lead-based paint is likely present onsite. Comprehensive asbestos and lead-based paint surveys suitable for demolition purposes have not been performed on the majority of buildings at Fort Monroe. Rather, specific, targeted demolition or room-by-room renovation surveys have been performed. Other hazardous materials may also be present in buildings including, but not limited to, light ballasts and switches containing hazardous chemicals. There are a limited set of circumstances under which the cleanup of these materials in buildings is paid for by the Department of Defense. In most cases, the new property owner (lessee) is responsible for investigation and cleanup costs associated with the removal of asbestos, lead-based paint, and other hazardous materials in buildings.

IMPORTANCE OF THE REUSE PLAN IN ENVIRONMENTAL CLEANUP

Shaded areas identified in Figure 6.1 indicate areas with known or potential environmental contamination concerns at Fort Monroe. These areas must be adequately investigated so that environmental cleanup decisions can be made. Environmental cleanup requirements will be based primarily on future land uses shown in the approved Reuse Plan for Fort Monroe. Typically,

- Property used for residential purposes, hospitals and medical care, schools and daycare, and certain types of research generally require the highest (i.e., most conservative) level of cleanup.

- Property used for commercial or retail purposes generally require a moderate level of cleanup; and

- Property used for recreational purposes generally require the lowest (i.e., least stringent) level of cleanup.

SCHEDULE FOR ENVIRONMENTAL INVESTIGATION AND CLEANUP

Late in 2006, representatives of the U.S. Army, VDEQ, and the FMFADA's predecessor organization (the Hampton FADA) began meeting on a regular basis. These meetings – now including the FMFADA – will continue until the Fort Monroe property transfers from the U.S. Army to the new owner. These meetings are used as venues to identify environmental contamination concerns with respect to redevelopment and facilitate the U.S. Army's environmental investigation and cleanup efforts.

The parties agreed on a scope of work for the investigation of hazardous substance release and solid waste disposal sites and the U.S. Army began field investigation work in August 2007. A more detailed plan for the comprehensive investigation of MEC releases and disposal is currently under development with MEC field investigation work expected to begin early in 2009. As these investigations are completed, cleanup can proceed immediately, or alternatively may be phased to take place concurrently with redevelopment to achieve cost-savings.

The cost of environmental clean-up and the amount of time it will take is directly related to the type and extent of environmental contamination present and the level of clean-up required for protection of human health and the environment based on the planned reuse.

transportation, infrastructure, & flood control strategy 7

Figure 7.1. Existing conditions, main roads

The Transportation, Infrastructure, and Flood Control analysis was prepared by Kimley-Horn & Associates. The following sections provide an overview of the data collection, analyses, and recommendations. Additional and more detailed information can be found in The Technical Support Manual for the Reuse of Fort Monroe.

TRANSPORTATION

Mobility is a critical factor in future development opportunities at Fort Monroe. The ability to move people and resources within this highly historic and isolated area with varying land uses is a key element of creating positive experiences for residents, commuters, area consumers, and tourists. Without proper planning and implementation, transportation could become a significant detriment to the future success of Fort Monroe. As part of the Fort Monroe reuse plan, traffic flow into and out of the area was evaluated to determine the level of mobility needed to support redevelopment of surrounding lands and improve access for recreational opportunities, while preserving the historical assets. In the context of the Fort Monroe reuse plan, the transportation element has three primary goals:

1. Restructure the Fort Monroe entrance to serve multiple users and various developments that will provide the necessary density for a self-sustaining development.

2. Establish an identity for certain areas within the Fort and provide clear access for the variety of users that will enjoy the various attributes.

3. Provide key transportation improvements that will support future economic vitality and an enhanced quality of life for the surrounding communities.

These transportation improvements must consider vehicles and other modes of transportation such as transit, parking, pedestrians, and bicyclists.

Today, all access into and out of Fort Monroe occurs at a single five-legged intersection. There are two roadways in the City of Hampton (Mellen Street and Mercury Boulevard) that intersect from the north to form two of the five legs. These two roadways traverse through the adjacent Phoebus neighborhood and provide access to Interstate 64 (I-64) and other parts of the city. Internal to the Fort, McNair Drive, Ingalls Road, and Stilwell Drive create the remaining three legs of this intersection. As reuse opportunities are considered, the transportation analysis must evaluate not only the roadway network within the confined boundaries of Fort Monroe but also the external connections to the surrounding communities.

There are several key framework streets that provide both external and internal mobility to Fort Monroe including access to existing office/administration facilities and residential developments. The transportation study area includes the entire Fort as well as portions of the Phoebus community. The external corridors within the study area consist primarily of I-64, Mallory Street, Mellen Street, and Mercury Boulevard. The internal corridors consist primarily of McNair Drive, Ingalls Road, Stilwell Drive, and Fenwick Road. The Fort's roadway network consists of a street network and sidewalk system. Modifications to these existing networks should be minimal and would likely be comprised of minor improvements to provide enhanced access in certain areas. There are three roadways that provide access across the moat but these access points place significant size restrictions on the delivery vehicles, construction equipment, moving vans, and other large vehicles. Along with a narrow two-way ring road with limited parking, these infrastructure limitations may restrict the ability for some private sector uses and public events that generate crowds or large groups.

According to the Hampton Roads Transit (HRT) website, there is no fixed-route transit service between Fort Monroe and other areas of Hampton. Given that there are no HRT routes within Fort Monroe, transit-related passenger amenities are minimal. As reuse options are considered, it is recommended that a majority of the bus stops be marked with a highly visible sign, and actively used areas should be considered for transit stops with shelters.

A broad-level transportation analysis was performed to determine the impacts on the overall access to the Fort, and especially the main entrance, of traffic generated by the proposed reuse scenario. Given the constraints of the existing entrance, geometric improvements are recommended for this intersection for both operational and aesthetic reasons. The proposed configuration will create two separate ways into and out of Fort Monroe. A concept for this is depicted on the illustrative plan contained in Section 3 of this report. Additional maps that describe the details of the street modifications envisioned are contained in the *Technical Support Manual for the Reuse of Fort Monroe*. In the proposed configuration, those users destined for the historic areas of the Fort would be directed to Ingalls Roads, while residents/visitors of the proposed uses located at the northern/mid-section of Fort Monroe would be directed to Stilwell Drive. However, Fort Monroe is only one end of a trip, and the attraction of Mellen Street and Mercury Boulevard create the need to provide an internal connection along Eustis Lane to provide access to both external roadways. Since Eustis Lane will act as the decision point of the trip (motorists turning right or left), signalization is recommended at its intersections with Ingalls Road and Stilwell Drive.

The analysis presented above reflects an analysis of the internal street network on the Fort and the immediate adjacent street networks in the Phoebus community. The analysis was completed without the benefit

Figure 7.2. Infrastructure construction on the Fort

of the results of the recently completed tourism study. Based on the recent consideration of a tourism component on Fort Monroe, the Virginia Department of Transportation has expressed concern regarding the potential impact of redevelopment at Fort Monroe on the Interstate 64 Mallory Street and Woodland Road interchanges. Therefore, it is recommended that a more comprehensive traffic study be completed to study the effects of redevelopment and tourism potential on the internal and external street networks, inclusive of the Interstate 64/Mallory Street/ Woodland interchanges.

In the future, a connection should be made from Fenwick Road to the Buckroe area at the north end of Fort Monroe. The City of Hampton has prepared a few conceptual alignments for this connection and will be proceeding with further development of these concepts in the near future. The proposed connection is intended to provide a more convenient public access to the proposed recreational uses located at the northern end of Fenwick Road, and would also provide a completely separate alternate route during emergency evacuations of the Fort.

INFRASTRUCTURE

In general the Fort's infrastructure appears to be in better condition than was expected. Kimley-Horn's experience with other base closures has been that the existing infrastructure, particularly utility infrastructure, is old and not well maintained and typically requires substantial rehabilitation and/or replacement. In 2003, Hurricane Isabel inflicted considerable damage to the Fort's infrastructure and enabled the Army to secure $90 million in funding for hurricane repairs. This funding allowed for the replacement and upgrading of roads, some of the water distribution system, and some of the storm and sanitary sewer systems. Based on information provided by the Army, Figure 7.3 summarizes the condition of the different infrastructure systems.

INFRASTRUCTURE COMPONENT	CONDITION
Roads	Very Good
Water	Fair to Good
Sanitary Sewer	Very Good
Drainage	Good
Electrical Power	Very Good
Natural Gas	Fair

Figure 7.3. Infrastructure conditions on the Fort

While most of the infrastructure is reported to be in generally good condition, proposed development will require some upgrades to the existing systems, as well as extensions to the redevelopment areas primarily for water, sewer, and storm drainage infrastructure. If a northern connection to Buckroe is implemented, then water should be extended from

the north to provide an enhanced looped system on the Fort. As redevelopment and potential private occupancy of existing buildings ensues, separate power and water metering for the various buildings will likely be required and could represent a significant cost overall based on the quantity of buildings that would require metering. Currently, the Fort's infrastructure systems are predominantly owned by the Army including roads, drainage, water, sanitary sewer, gas, etc. Future ownership, operation, and maintenance of this infrastructure could present significant challenges and possibly costs as it is understood that most of these systems do not meet local municipal, regional, or state standards. At a minimum it is recommended that a study be undertaken to assess the condition of each of these systems to identify deficiencies and upgrades that may be required that would be dependent on future ownership of these systems. As it relates to the aforementioned assessment study and analyses, it is important to note that each of the municipalities that comprise the Hampton Roads region, as well as the Hampton Roads Sanitation District (HRSD), are currently under a consent order with the Virginia Department of Environmental Quality (DEQ). This consent order includes specific requirements that each municipality must meet concerning the condition, operation, and upgrading of their wastewater collection systems. This would likely have an affect on the analyses and subsequent recommended improvements to the City of Hampton's and HRSD's systems that the Fort discharges to in the Phoebus area and may represent costs to upgrade these systems as well.

INFRASTRUCTURE COSTS

Based on data collection, information provided by the Army and Public Works staff, and preliminary analyses, preliminary cost estimates have been developed for certain infrastructure components that appear to be under capacity for new development or require extension to the new development areas. Costs associated with the new development itself, such as roads, water, sewer, drainage, and street lighting, also are excluded as those costs would likely be included in the development costs for the new development.

The infrastructure components are representative of what would typically be public infrastructure (i.e. water, sewer, stormwater). These costs also are exclusive of any upgrades to the existing infrastructure systems required to bring the infrastructure into compliance with standards of the eventual operator of these systems. These costs cannot be determined until it is known what the system requirements of the eventual operator include and an assessment is conducted to determine the deficiencies, if any, of that system. Infrastructure components that would typically be considered private infrastructure (power, gas, and communications) are not included in these estimates since these costs would be developed by the eventual owners of these systems, such as Dominion Virginia Power, Virginia Natural Gas, Cox Communications, and/or Verizon. The cost information is based on 2008 costs (see Figure 7.4).

FLOOD CONTROL

Located on the southernmost point of the Hampton Roads Peninsula, Fort Monroe lies almost entirely in a designated 100-year floodplain. The only part of the base not in a floodplain zone is a strip of land running north-south along the eastern edge of the Fort. The Fort is a National Historic Landmark and many of the buildings have not been elevated or altered since their construction, making them especially prone to flood damage. First floor elevations of these structures, as determined by the U.S. Army Corps of Engineers' 2004 structure inventory of Fort Monroe, lie below the 100-year floodplain elevation. These elevations also are well below the flood heights reached during Hurricane Isabel. Their preservation for historic purposes limits modifications which can be made to the structures to flood-proof them or raise first floor elevations to conform to current floodplain requirements. Hurricane Isabel flooded Fort Monroe in September of 2003 with a peak flood elevation of 6.26 feet. This flooding was comparable to the 1933 Hurricane, which brought peak storm surges of approximately 7.41 feet. This caused severe flooding at Fort Monroe from the storm surge moving

Figure 7.4. Estimated infrastructure costs

Improvement		Estimated Cost
Water System Improvements		
System Upgrade Recommendations from URS Study (2004 dollars)	$1,500,000	
Escalation to 2008 dollars		$2,623,509
Northern Connection from Buckroe 10,000' length - assumed 12" diameter		$1,000,000
Extension to new development area 4,000' length - assumed 12" diameter		$400,000
Water meters for all non-metered existing buildings Assumes hRSD and NNWW SDC fees would be waived		

	Installation	Escalation for Retrofit	Total
30 - 5/8" meters	$400	$600	$18,000
39 - 3/4" meters	$500	$750	$29,250
22 - 1" meters	$600	$900	$19,800
10 - 2" meters	$800	$1,200	$12,000
10 - 3" meters	$1,000	$1,500	$15,000
1 - 4" meter	$1,500	$2,250	$2,250
14 - 4" detector checks	$5,000	$7,500	$105,000
13 - 6" detector checks	$8,000	$12,000	$156,000
8 - 8" detector checks	$10,000	$15,000	$120,000

	Total Water Metering	$477,300
	SubTotal Water	**$4,500,809**
Wastewater Collection System Improvements		
New Pump Station in new development area		$750,000
Extension to new development area Assumes pump station will move to central location 2,000' length - assumed 12" diameter sfm		$200,000
hRSD Pump Station #225 Upgrade and off-site system upgrades (Allowance)		$250,000
	SubTotal Wastewater	**$1,200,000**
Stormwater Quality Collection and Retention System		
New Regional Stormwater Management Basin (BMP) in new development area - assumed to be 5 acres total of a wet detention system (Allowance)		$1,000,000
New outfall from BMP (Allowance) 600' length - assumed 42" diameter		$120,000
New inflow pipe from new development area 2 pipes totaling 500' length - assumed to be 36" diameter		$75,000
	SubTotal Stormwater	**$1,195,000**

Improvement		Estimated Cost
Flood Protection		
Cost from COE Study (2005 dollars)	$26,400,000	
Escalation to 2007 dollars	$31,944,000	
Minus Portion that was Funded in 2007	$22,000,000	
SubTotal	$9,944,000	
Escalation to 2008 dollars	**$10,938,400**	
	SubTotal Flood Protection	**$10,938,400**
Northern Connection Roadway and Bridge		
2-lane undivided roadway Right-of-way acquisition costs excluded Wetlands Mitigation costs excluded		
Length of new road (30' width) = 700' @ $450 per l.f.		$315,000
Length of road reconstruction (30' width) = 1,000' @ $300 per l.f.		$300,000
Length of bridge construction (30' width) = 300' @ $175 per s.f.		$1,575,000
	SubTotal Northern Connection	**$2,190,000**
Reconfigured Main Entrance		
Length of road reconstruction (24' width) = 1,500' @ $250 per l.f.		$375,000
New traffic signal		$250,000
	SubTotal Reconfigured Main Entrance	**$625,000**
Moat Bridge Repairs		
Repair Costs from April 9, 2007 kCI Technologies Bridge Inspection Report (2007 dollars)	$282,350	
Escalation to 2008 dollars		$324,703
	SubTotal Moat Bridge Repairs	**$324,703**
	TOTAL	**$20,973,912**

up through storm drains, beach over washes, sea wall topping and failure, backflow through storm sewers and berm blowouts. The storm also caused the collapse of several piers and extensive tree loss from high winds.

In response to the substantial damage sustained on Fort Monroe during Hurricane Isabel, in May 2005 the Norfolk District, U.S. Army Corps of Engineers (ACOE) conducted a flood evaluation and protection study to evaluate the flooding and develop measures to reduce future flooding from storms of similar strength. From these measures a recommended flood protection plan was developed consisting of the following elements:

- Installation of flap roller gates on the outlet from the Fort Monroe moat to prevent back flooding during large storm events.

- Construction of a new seawall in the southern Fenwick Road region with a higher elevation of 9.5 feet NAVD, extending from the Navy Pier to the Battery Parrott to include a "toe" of small armor stone to prevent scouring of the base of the wall.

- Construction of a series of beach berms and breakwaters from the southern end of the northern seawall at Battery Parrott to the intersection of the proposed berm (see next point) and the existing seawall.

- Construction of an interior berm southward across the northern end of the moat and into the southern portion of the base to prevent flooding from Mill Creek. The interior berm would be installed in the moat with an elevation of 8.0 feet (NAVD 88).

- Lowering of the berm existing north of Bowling Alley in Mill Creek to reduce the ponding of water trapped behind the berm during heavy rainfalls and flooding from other locations on the Fort.

In 2007, the Department of Defense approved partial funding to fund some of the improvements proposed in the ACOE study. These improvements are currently under construction and mainly include the following elements of the original recommendations:

- Reconstruction of the flood wall along the southern end of the Fort at an elevation approximately 2.5 feet higher than the existing flood wall elevation

- Construction of the three southernmost breakwaters

- Construction of a terminal groin at the southern tip of the Fort

In addition to these improvements, the Army secured some additional funding to control flooding through the storm sewers and has recently installed backflow prevention valves

Figures 7.5. Newly constructed seawall and armor stone.

Figures 7.6 - 7.7. Hurricane Isabel caused severe flooding along Ingalls Road.

Figure 7.7.

on storm sewers that discharge into the Chesapeake Bay and Mill Creek as well as all of the inflow and outfall pipes located in the moat. This represents a critical element of the original ACOE recommendations as much of the flooding that occurred during Hurricane Isabel was due to storm surge through these drainage systems. The Army indicated that there also may be additional funds available based on the favorable bid that was received for the funded flood protection project. It is possible that these funds would be used to fund more of the improvements in the original ACOE study and could include the construction of three additional breakwaters northward of the three that are currently under construction. As redevelopment planning and implementation for reuse of the Fort continues, it is recommended that a funding source be identified to provide the additional funding required to complete the ACOE recommendations.

In order for any future private leaseholds or other private investment in Fort Monroe to take place, it will be important to secure federally subsidized flood insurance and comply with the City of Hampton's floodplain ordinance. An examination of the existing buildings on the Fort indicates they fall into three general categories.

- The first category consists of historic buildings.
- The second category includes buildings that are not historic but which were built prior to the time of the federal flood insurance study of the City of Hampton in July 1987 (Pre-FIRM buildings).
- The third category is that of buildings constructed since the flood insurance study was completed (Post-FIRM buildings).

FEMA's regulations indicate that localities can exempt historic structures from the requirements of the National Flood Insurance Program (NFIP) by either exempting them through the definition of substantial improvement or issuing variances to the structures. However, the improvements exempted must not preclude the continued designation as a historic structure. Thus, all historic buildings on the base would qualify for pre-FIRM exemption, as long as they meet the FEMA definition of a historic building. Pre-FIRM buildings will be exempt from FEMA regulations and the Hampton City Flood Ordinance; however, any additions, extensions, or major improvements amounting to more than 50 percent of the market value of the structure will cause the entire structure to meet FIRM regulations.

The Fort engineering office indicates that since 1987, all new buildings have been constructed in accordance with the building requirements of the NFIP. All new construction (post-FIRM) must continue to conform to the current flood zone construction requirements. As noted above, the ACOE has inventoried all structures on the Fort and determined the ground elevation around the structures and the elevation of the first finished floor. This information may be used in the future to assess what, if any, modifications may need to be made to existing buildings for them to be eligible for federal flood insurance if adaptive-

Figure 7.8. View of the seawall along the Chesapeake Bay, looking south toward the Chamberlin hotel.

ly reused by private residents or businesses. Additional consultation with FEMA and the City of Hampton will be required to determine the specific procedure for complying with flood insurance program requirements.

The effects of sea level rise need to be considered in any long term infrastructure planning and costs for Fort Monroe. Sea level has been estimated to rise approximately two feet in the next century as predicted by Wetlands Watch in association with the Virginia Institute of Marine Science. Climate changes are anticipated to increase the frequency and intensity of tropical storms and hurricanes. Accordingly, the flood protection measures previously constructed or under construction currently may not be sufficient to deal with the increased flooding potential created by long term sea level rise. Planning for Fort Monroe reuse should include a site specific evaluation of the impact of sea level rise (under various height predictions based on different models) as it relates to the need for additional flood protection measures at the Fort.

RECOMMENDATIONS – TRANSPORTATION

Transportation – Complete a comprehensive traffic analysis to study the effects of redevelopment and tourism potential on the Fort's internal street network as well as the external street networks, inclusive of Interstate 64.

Transportation – Coordinate with the City of Hampton regarding further studies regarding a northern roadway connection to the Buckroe area.

RECOMMENDATIONS – INFRASTRUCTURE

Water – Complete a study to assess the condition of the Fort's water distribution system and identify deficiencies in the system relative to current Newport News Waterworks or regional standards.

Wastewater – Complete a study to assess the condition of the Fort's wastewater collection system and identify deficiencies in the system relative to current City of Hampton, Virginia Department of Health, and/or regional standards. This study also should include an infiltration and inflow as well as a capacity analysis for the Hampton Roads Sanitation District's pump station #225.

Power – Request that Dominion Virginia Power perform a comprehensive conditional assessment of their system and provide costs associated with upgrading or replacement of their system inclusive of metering of existing buildings.

Capital Improvement Costs - Further develop cost analysis for anticipated capital costs as additional studies are undertaken and more data becomes available.

RECOMMENDATIONS – FLOOD PROTECTION AND INSURANCE

Flood Protection – Identify a funding source to provide the additional funding required to complete the Army Corps of Engineers flood protection recommendations.

Flood Protection – Request that the City of Hampton give Fort Monroe the highest priority in their ongoing watershed and floodplain study.

Flood Insurance – Consult with FEMA and the City of Hampton to determine the specific procedures for complying with flood insurance program requirements.

Flood Protection – Develop a site specific evaluation of the impact of sea level rise (under various height predictions based on different models) for additional flood protection measures at the Fort.

APPENDIX C RECORD OF NON-APPLICABILITY CONCERNING THE GENERAL CONFORMITY RULE (40 CFR 51)

This page intentionally left blank.

RECORD ON NON-APPLICABILITY CONCERNING THE
GENERAL CONFORMITY RULE (40 CFR 51)

The officially stated mission of Fort Monroe is "To provide quality base operations for national defense agencies while preparing the Fort Monroe community for the future." The installation consists of 565 acres, the majority of which is devoted to outdoor recreation and community facilities. The rest is occupied by housing, offices, training facilities, and historic landmarks. Recommendations of the 2005 Defense Base Closure and Realignment Commission (BRAC 05) require the closure of Fort Monroe. Based on the BRAC 05 recommendations, the Army proposes to dispose of all 565 acres that are excess to Army military needs. This proposed action requires that the Army complete a conformity review to determine whether the action is subject to the U.S. Environmental Protection Agency's General Conformity Rule (40 CFR Part 51).

Fort Monroe is located in an area that is in maintenance status for ozone. The General Conformity Rule provides that actions proposed to occur within maintenance areas must, unless otherwise exempt, be accompanied by a Conformity Determination. Among the recognized exemptions are "transfers of ownership, interests, and titles in land, facilities, and real and personal properties, regardless of the form or method of the transfer" (40 CFR Part 51.853). Because the Army's proposed disposal action will involve the sale or other title transfer of federal property, it has been determined that the action is exempt from the General Conformity Rule requirement to prepare a full Conformity Determination. Should effects to air quality occur from reuse of the disposed property due to a result of federal agency funding, it will be the responsibility of the new land owners to meet any requirements for ensuring conformity with federal or state air quality plans. In any event, estimates for all reuse scenarios show impacts below the *de minimus* levels and thus mitigation will not be required.

CONFORMITY

Proponent: U.S. Army Corps of Engineers, Mobile District

Responsible Official: _____ 23 April 2010

BRAC Environmental Coordinator Date

8/6/2009 04:44:43 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

Demo/Construction Lower Bracket All Pollutants

File Name: C:\Documents and Settings\mmkaplan\Application Data\Urbemis\Version9a\Projects\MonroeDemoConLower.urb924

Project Name: Fort Monroe Demolition Lower

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year mitigated)	5.42	29.23	90.64	0.09	49.38	1.40	50.77	10.38	1.26	11.64	11,183.54
2013 TOTALS (tons/year mitigated)	5.07	27.21	84.19	0.09	49.38	1.30	50.68	10.38	1.17	11.55	11,186.35
2014 TOTALS (tons/year mitigated)	4.71	25.14	78.28	0.09	49.38	1.20	50.58	10.38	1.08	11.45	11,189.03
2015 TOTALS (tons/year mitigated)	4.36	23.04	72.77	0.09	49.38	1.12	50.50	10.38	1.00	11.38	11,191.21
2016 TOTALS (tons/year mitigated)	4.06	21.16	67.85	0.09	49.38	1.04	50.42	10.38	0.93	11.31	11,192.62
2017 TOTALS (tons/year mitigated)	3.75	19.28	62.99	0.08	49.19	0.96	50.15	10.34	0.86	11.19	11,151.04
2018 TOTALS (tons/year mitigated)	3.47	17.70	59.04	0.09	49.38	0.88	50.26	10.38	0.79	11.16	11,195.06
2019 TOTALS (tons/year mitigated)	3.24	16.18	55.15	0.09	49.38	0.81	50.19	10.38	0.72	11.10	11,196.12
2020 TOTALS (tons/year mitigated)	3.01	14.85	51.67	0.09	49.57	0.75	50.32	10.42	0.67	11.09	11,240.03
2021 TOTALS (tons/year mitigated)	2.55	13.86	38.52	0.09	49.38	0.74	50.12	10.38	0.66	11.04	11,201.49
2022 TOTALS (tons/year mitigated)	2.54	13.81	38.38	0.08	49.19	0.74	49.93	10.34	0.66	10.99	11,158.57
2023 TOTALS (tons/year mitigated)	2.54	13.81	38.38	0.08	49.19	0.74	49.93	10.34	0.66	10.99	11,158.57
2024 TOTALS (tons/year mitigated)	2.56	13.92	38.67	0.09	49.57	0.75	50.31	10.42	0.66	11.08	11,244.40
2025 TOTALS (tons/year mitigated)	2.55	13.86	38.52	0.09	49.38	0.74	50.12	10.38	0.66	11.04	11,201.49
2026 TOTALS (tons/year mitigated)	2.31	13.39	31.54	0.09	49.38	0.74	50.12	10.38	0.66	11.03	11,205.59
2027 TOTALS (tons/year mitigated)	2.31	13.39	31.54	0.09	49.38	0.74	50.12	10.38	0.66	11.03	11,205.59
2028 TOTALS (tons/year mitigated)	2.30	13.34	31.42	0.08	49.19	0.74	49.93	10.34	0.65	10.99	11,162.66
2029 TOTALS (tons/year mitigated)	2.31	13.39	31.54	0.09	49.38	0.74	50.12	10.38	0.66	11.03	11,205.59
2030 TOTALS (tons/year mitigated)	2.31	13.39	31.54	0.09	49.38	0.74	50.12	10.38	0.66	11.03	11,205.59

8/6/2009 04:44:43 PM

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012	5.42	29.23	90.64	0.09	49.38	1.40	50.77	10.38	1.26	11.64	11,183.54
Building 01/01/2012-12/31/2030	3.01	8.75	79.73	0.08	0.42	0.48	0.90	0.15	0.42	0.57	9,017.76
Building Off Road Diesel	0.45	2.67	1.78	0.00	0.00	0.19	0.19	0.00	0.17	0.17	294.84
Building Vendor Trips	0.16	2.01	1.59	0.00	0.02	0.08	0.09	0.01	0.07	0.08	457.52
Building Worker Trips	2.40	4.07	76.36	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,265.40
Demolition 01/01/2012-12/31/2030	0.66	5.38	3.30	0.00	0.00	0.25	0.25	0.00	0.23	0.23	555.96
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.65	5.37	3.14	0.00	0.00	0.25	0.25	0.00	0.23	0.23	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.68
Fine Grading 01/01/2012-12/31/2030	1.76	15.10	7.61	0.00	48.96	0.66	49.62	10.22	0.61	10.83	1,609.81
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.74	15.08	7.24	0.00	0.00	0.66	0.66	0.00	0.61	0.61	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.02
2013	5.07	27.21	84.19	0.09	49.38	1.30	50.68	10.38	1.17	11.55	11,186.35
Building 01/01/2012-12/31/2030	2.75	7.98	73.84	0.08	0.42	0.46	0.88	0.15	0.39	0.54	9,020.56
Building Off Road Diesel	0.42	2.48	1.74	0.00	0.00	0.17	0.17	0.00	0.15	0.15	294.84
Building Vendor Trips	0.15	1.78	1.48	0.00	0.02	0.07	0.09	0.01	0.06	0.07	457.55
Building Worker Trips	2.19	3.72	70.62	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,268.17
Demolition 01/01/2012-12/31/2030	0.63	5.06	3.16	0.00	0.00	0.24	0.24	0.00	0.22	0.22	555.97
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.63	5.06	3.02	0.00	0.00	0.23	0.23	0.00	0.22	0.22	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.68
Fine Grading 01/01/2012-12/31/2030	1.69	14.16	7.19	0.00	48.96	0.61	49.57	10.22	0.56	10.79	1,609.83
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.68	14.14	6.85	0.00	0.00	0.61	0.61	0.00	0.56	0.56	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.02	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.03

8/6/2009 04:44:43 PM

2014	4.71	25.14	78.28	0.09	49.38	1.20	50.58	10.38	1.08	11.45	11,189.03
Building 01/01/2012-12/31/2030	2.50	7.28	68.39	0.08	0.42	0.43	0.85	0.15	0.37	0.52	9,023.22
Building Off Road Diesel	0.38	2.30	1.70	0.00	0.00	0.14	0.14	0.00	0.13	0.13	294.84
Building Vendor Trips	0.14	1.57	1.37	0.00	0.02	0.06	0.08	0.01	0.06	0.06	457.58
Building Worker Trips	1.99	3.40	65.32	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,270.80
Demolition 01/01/2012-12/31/2030	0.60	4.73	3.04	0.00	0.00	0.21	0.21	0.00	0.20	0.20	555.97
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.60	4.72	2.91	0.00	0.00	0.21	0.21	0.00	0.19	0.19	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.69
Fine Grading 01/01/2012-12/31/2030	1.60	13.13	6.86	0.00	48.96	0.56	49.52	10.22	0.51	10.74	1,609.84
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.59	13.11	6.54	0.00	0.00	0.56	0.56	0.00	0.51	0.51	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.02	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.05
2015	4.36	23.04	72.77	0.09	49.38	1.12	50.50	10.38	1.00	11.38	11,191.21
Building 01/01/2012-12/31/2030	2.29	6.60	63.32	0.08	0.42	0.41	0.83	0.15	0.35	0.50	9,025.39
Building Off Road Diesel	0.35	2.11	1.67	0.00	0.00	0.13	0.13	0.00	0.12	0.12	294.84
Building Vendor Trips	0.12	1.38	1.26	0.00	0.02	0.05	0.07	0.01	0.05	0.05	457.62
Building Worker Trips	1.81	3.11	60.39	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,272.93
Demolition 01/01/2012-12/31/2030	0.56	4.36	2.92	0.00	0.00	0.20	0.20	0.00	0.18	0.18	555.98
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.56	4.35	2.80	0.00	0.00	0.20	0.20	0.00	0.18	0.18	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.69
Fine Grading 01/01/2012-12/31/2030	1.51	12.09	6.53	0.00	48.96	0.51	49.47	10.22	0.47	10.70	1,609.85
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.50	12.07	6.24	0.00	0.00	0.51	0.51	0.00	0.47	0.47	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.02	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.06

8/6/2009 04:44:43 PM

2016	4.06	21.16	67.85	0.09	49.38	1.04	50.42	10.38	0.93	11.31	11,192.62
Building 01/01/2012-12/31/2030	2.10	6.02	58.77	0.08	0.42	0.38	0.80	0.15	0.33	0.48	9,026.78
Building Off Road Diesel	0.32	1.94	1.65	0.00	0.00	0.11	0.11	0.00	0.11	0.11	294.84
Building Vendor Trips	0.11	1.21	1.18	0.00	0.02	0.05	0.06	0.01	0.04	0.05	457.64
Building Worker Trips	1.67	2.86	55.95	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,274.30
Demolition 01/01/2012-12/31/2030	0.53	4.01	2.81	0.00	0.00	0.18	0.18	0.00	0.17	0.17	555.98
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.52	4.01	2.70	0.00	0.00	0.18	0.18	0.00	0.17	0.17	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.69
Fine Grading 01/01/2012-12/31/2030	1.43	11.13	6.26	0.00	48.96	0.48	49.43	10.22	0.44	10.66	1,609.86
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.42	11.12	5.99	0.00	0.00	0.47	0.47	0.00	0.44	0.44	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.06
2017	3.75	19.28	62.99	0.08	49.19	0.96	50.15	10.34	0.86	11.19	11,151.04
Building 01/01/2012-12/31/2030	1.90	5.45	54.31	0.08	0.42	0.36	0.78	0.15	0.31	0.46	8,993.49
Building Off Road Diesel	0.29	1.77	1.62	0.00	0.00	0.10	0.10	0.00	0.09	0.09	293.71
Building Vendor Trips	0.10	1.07	1.09	0.00	0.02	0.04	0.06	0.01	0.04	0.04	455.91
Building Worker Trips	1.50	2.61	51.60	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,243.87
Demolition 01/01/2012-12/31/2030	0.50	3.66	2.71	0.00	0.00	0.17	0.17	0.00	0.15	0.15	553.85
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.50	3.66	2.60	0.00	0.00	0.17	0.17	0.00	0.15	0.15	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.63
Fine Grading 01/01/2012-12/31/2030	1.35	10.17	5.97	0.00	48.77	0.43	49.20	10.19	0.39	10.58	1,603.70
Fine Grading Dust	0.00	0.00	0.00	0.00	48.77	0.00	48.77	10.18	0.00	10.18	0.00
Fine Grading Off Road Diesel	1.34	10.16	5.72	0.00	0.00	0.43	0.43	0.00	0.39	0.39	1,563.78
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.92

8/6/2009 04:44:43 PM

2018	3.47	17.70	59.04	0.09	49.38	0.88	50.26	10.38	0.79	11.16	11,195.06
Building 01/01/2012-12/31/2030	1.74	4.99	50.62	0.08	0.42	0.35	0.77	0.15	0.29	0.45	9,029.20
Building Off Road Diesel	0.27	1.63	1.60	0.00	0.00	0.09	0.09	0.00	0.08	0.08	294.84
Building Vendor Trips	0.10	0.96	1.02	0.00	0.02	0.04	0.06	0.01	0.04	0.04	457.69
Building Worker Trips	1.38	2.41	47.99	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,276.67
Demolition 01/01/2012-12/31/2030	0.47	3.36	2.63	0.00	0.00	0.15	0.15	0.00	0.14	0.14	555.98
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.47	3.36	2.54	0.00	0.00	0.15	0.15	0.00	0.14	0.14	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.70
Fine Grading 01/01/2012-12/31/2030	1.26	9.35	5.79	0.00	48.96	0.39	49.34	10.22	0.35	10.58	1,609.87
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.26	9.33	5.56	0.00	0.00	0.38	0.38	0.00	0.35	0.35	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.08
2019	3.24	16.18	55.15	0.09	49.38	0.81	50.19	10.38	0.72	11.10	11,196.12
Building 01/01/2012-12/31/2030	1.59	4.55	47.00	0.08	0.42	0.33	0.75	0.15	0.28	0.43	9,030.26
Building Off Road Diesel	0.25	1.49	1.58	0.00	0.00	0.07	0.07	0.00	0.07	0.07	294.84
Building Vendor Trips	0.09	0.86	0.96	0.00	0.02	0.04	0.05	0.01	0.03	0.04	457.72
Building Worker Trips	1.26	2.20	44.46	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,277.70
Demolition 01/01/2012-12/31/2030	0.44	3.08	2.56	0.00	0.00	0.13	0.13	0.00	0.12	0.12	555.99
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.44	3.07	2.47	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.70
Fine Grading 01/01/2012-12/31/2030	1.20	8.55	5.60	0.00	48.96	0.34	49.30	10.22	0.32	10.54	1,609.87
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.20	8.54	5.38	0.00	0.00	0.34	0.34	0.00	0.32	0.32	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.08

8/6/2009 04:44:43 PM

2020	3.01	14.85	51.67	0.09	49.57	0.75	50.32	10.42	0.67	11.09	11,240.03
Building 01/01/2012-12/31/2030	1.46	4.18	43.71	0.09	0.42	0.32	0.74	0.15	0.27	0.42	9,065.86
Building Off Road Diesel	0.22	1.38	1.58	0.00	0.00	0.07	0.07	0.00	0.06	0.06	295.97
Building Vendor Trips	0.08	0.77	0.90	0.00	0.02	0.03	0.05	0.01	0.03	0.04	459.50
Building Worker Trips	1.15	2.03	41.23	0.08	0.41	0.22	0.63	0.15	0.18	0.33	8,310.40
Demolition 01/01/2012-12/31/2030	0.42	2.83	2.50	0.00	0.00	0.13	0.13	0.00	0.12	0.12	558.12
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.82	2.42	0.00	0.00	0.13	0.13	0.00	0.12	0.12	541.35
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.77
Fine Grading 01/01/2012-12/31/2030	1.14	7.84	5.46	0.00	49.14	0.31	49.45	10.26	0.28	10.55	1,616.05
Fine Grading Dust	0.00	0.00	0.00	0.00	49.14	0.00	49.14	10.26	0.00	10.26	0.00
Fine Grading Off Road Diesel	1.13	7.83	5.26	0.00	0.00	0.31	0.31	0.00	0.28	0.28	1,575.81
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.24
2021	2.55	13.86	38.52	0.09	49.38	0.74	50.12	10.38	0.66	11.04	11,201.49
Building 01/01/2012-12/31/2030	1.01	3.24	30.68	0.08	0.42	0.31	0.73	0.15	0.26	0.41	9,035.59
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.06	0.53	0.70	0.00	0.02	0.02	0.04	0.01	0.02	0.03	457.84
Building Worker Trips	0.72	1.35	28.41	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,282.92
Demolition 01/01/2012-12/31/2030	0.41	2.82	2.47	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.71
Fine Grading 01/01/2012-12/31/2030	1.13	7.80	5.37	0.00	48.96	0.31	49.26	10.22	0.28	10.51	1,609.90
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.13	7.80	5.24	0.00	0.00	0.31	0.31	0.00	0.28	0.28	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.11

8/6/2009 04:44:43 PM

2022	2.54	13.81	38.38	0.08	49.19	0.74	49.93	10.34	0.66	10.99	11,158.57
Building 01/01/2012-12/31/2030	1.00	3.23	30.56	0.08	0.42	0.31	0.73	0.15	0.26	0.41	9,000.97
Building Off Road Diesel	0.22	1.36	1.56	0.00	0.00	0.06	0.06	0.00	0.06	0.06	293.71
Building Vendor Trips	0.06	0.53	0.70	0.00	0.02	0.02	0.04	0.01	0.02	0.03	456.08
Building Worker Trips	0.72	1.34	28.30	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,251.18
Demolition 01/01/2012-12/31/2030	0.41	2.80	2.46	0.00	0.00	0.13	0.13	0.00	0.12	0.12	553.87
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.80	2.40	0.00	0.00	0.13	0.13	0.00	0.12	0.12	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.65
Fine Grading 01/01/2012-12/31/2030	1.13	7.77	5.35	0.00	48.77	0.31	49.08	10.19	0.28	10.47	1,603.73
Fine Grading Dust	0.00	0.00	0.00	0.00	48.77	0.00	48.77	10.18	0.00	10.18	0.00
Fine Grading Off Road Diesel	1.12	7.77	5.22	0.00	0.00	0.31	0.31	0.00	0.28	0.28	1,563.78
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.95
2023	2.54	13.81	38.38	0.08	49.19	0.74	49.93	10.34	0.66	10.99	11,158.57
Building 01/01/2012-12/31/2030	1.00	3.23	30.56	0.08	0.42	0.31	0.73	0.15	0.26	0.41	9,000.97
Building Off Road Diesel	0.22	1.36	1.56	0.00	0.00	0.06	0.06	0.00	0.06	0.06	293.71
Building Vendor Trips	0.06	0.53	0.70	0.00	0.02	0.02	0.04	0.01	0.02	0.03	456.08
Building Worker Trips	0.72	1.34	28.30	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,251.18
Demolition 01/01/2012-12/31/2030	0.41	2.80	2.46	0.00	0.00	0.13	0.13	0.00	0.12	0.12	553.87
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.80	2.40	0.00	0.00	0.13	0.13	0.00	0.12	0.12	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.65
Fine Grading 01/01/2012-12/31/2030	1.13	7.77	5.35	0.00	48.77	0.31	49.08	10.19	0.28	10.47	1,603.73
Fine Grading Dust	0.00	0.00	0.00	0.00	48.77	0.00	48.77	10.18	0.00	10.18	0.00
Fine Grading Off Road Diesel	1.12	7.77	5.22	0.00	0.00	0.31	0.31	0.00	0.28	0.28	1,563.78
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.95

8/6/2009 04:44:43 PM

2024	2.56	13.92	38.67	0.09	49.57	0.75	50.31	10.42	0.66	11.08	11,244.40
Building 01/01/2012-12/31/2030	1.01	3.26	30.80	0.09	0.42	0.31	0.73	0.15	0.26	0.41	9,070.21
Building Off Road Diesel	0.22	1.38	1.58	0.00	0.00	0.07	0.07	0.00	0.06	0.06	295.97
Building Vendor Trips	0.06	0.53	0.70	0.00	0.02	0.02	0.04	0.01	0.02	0.03	459.59
Building Worker Trips	0.72	1.35	28.52	0.08	0.41	0.22	0.63	0.15	0.18	0.33	8,314.65
Demolition 01/01/2012-12/31/2030	0.42	2.83	2.48	0.00	0.00	0.13	0.13	0.00	0.12	0.12	558.13
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.82	2.42	0.00	0.00	0.13	0.13	0.00	0.12	0.12	541.35
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.77
Fine Grading 01/01/2012-12/31/2030	1.13	7.83	5.39	0.00	49.14	0.31	49.45	10.26	0.28	10.55	1,616.07
Fine Grading Dust	0.00	0.00	0.00	0.00	49.14	0.00	49.14	10.26	0.00	10.26	0.00
Fine Grading Off Road Diesel	1.13	7.83	5.26	0.00	0.00	0.31	0.31	0.00	0.28	0.28	1,575.81
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.26
2025	2.55	13.86	38.52	0.09	49.38	0.74	50.12	10.38	0.66	11.04	11,201.49
Building 01/01/2012-12/31/2030	1.01	3.24	30.68	0.08	0.42	0.31	0.73	0.15	0.26	0.41	9,035.59
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.06	0.53	0.70	0.00	0.02	0.02	0.04	0.01	0.02	0.03	457.84
Building Worker Trips	0.72	1.35	28.41	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,282.92
Demolition 01/01/2012-12/31/2030	0.41	2.82	2.47	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.71
Fine Grading 01/01/2012-12/31/2030	1.13	7.80	5.37	0.00	48.96	0.31	49.26	10.22	0.28	10.51	1,609.90
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.13	7.80	5.24	0.00	0.00	0.31	0.31	0.00	0.28	0.28	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.11

8/6/2009 04:44:43 PM

2026	2.31	13.39	31.54	0.09	49.38	0.74	50.12	10.38	0.66	11.03	11,205.59
Building 01/01/2012-12/31/2030	0.77	2.77	23.75	0.08	0.42	0.31	0.73	0.15	0.26	0.41	9,039.67
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.05	0.44	0.60	0.00	0.02	0.02	0.04	0.01	0.02	0.02	457.90
Building Worker Trips	0.49	0.96	21.58	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,286.93
Demolition 01/01/2012-12/31/2030	0.41	2.81	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.72
Fine Grading 01/01/2012-12/31/2030	1.13	7.80	5.34	0.00	48.96	0.31	49.26	10.22	0.28	10.51	1,609.92
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.13	7.80	5.24	0.00	0.00	0.31	0.31	0.00	0.28	0.28	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.13
2027	2.31	13.39	31.54	0.09	49.38	0.74	50.12	10.38	0.66	11.03	11,205.59
Building 01/01/2012-12/31/2030	0.77	2.77	23.75	0.08	0.42	0.31	0.73	0.15	0.26	0.41	9,039.67
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.05	0.44	0.60	0.00	0.02	0.02	0.04	0.01	0.02	0.02	457.90
Building Worker Trips	0.49	0.96	21.58	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,286.93
Demolition 01/01/2012-12/31/2030	0.41	2.81	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.72
Fine Grading 01/01/2012-12/31/2030	1.13	7.80	5.34	0.00	48.96	0.31	49.26	10.22	0.28	10.51	1,609.92
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.13	7.80	5.24	0.00	0.00	0.31	0.31	0.00	0.28	0.28	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.13

8/6/2009 04:44:43 PM

2028	2.30	13.34	31.42	0.08	49.19	0.74	49.93	10.34	0.65	10.99	11,162.66
Building 01/01/2012-12/31/2030	0.77	2.76	23.66	0.08	0.42	0.30	0.72	0.15	0.26	0.41	9,005.03
Building Off Road Diesel	0.22	1.36	1.56	0.00	0.00	0.06	0.06	0.00	0.06	0.06	293.71
Building Vendor Trips	0.05	0.44	0.60	0.00	0.02	0.02	0.04	0.01	0.02	0.02	456.15
Building Worker Trips	0.49	0.96	21.49	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,255.18
Demolition 01/01/2012-12/31/2030	0.41	2.80	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	553.87
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.80	2.40	0.00	0.00	0.13	0.13	0.00	0.12	0.12	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.65
Fine Grading 01/01/2012-12/31/2030	1.12	7.77	5.32	0.00	48.77	0.31	49.08	10.19	0.28	10.47	1,603.75
Fine Grading Dust	0.00	0.00	0.00	0.00	48.77	0.00	48.77	10.18	0.00	10.18	0.00
Fine Grading Off Road Diesel	1.12	7.77	5.22	0.00	0.00	0.31	0.31	0.00	0.28	0.28	1,563.78
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.97
2029	2.31	13.39	31.54	0.09	49.38	0.74	50.12	10.38	0.66	11.03	11,205.59
Building 01/01/2012-12/31/2030	0.77	2.77	23.75	0.08	0.42	0.31	0.73	0.15	0.26	0.41	9,039.67
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.05	0.44	0.60	0.00	0.02	0.02	0.04	0.01	0.02	0.02	457.90
Building Worker Trips	0.49	0.96	21.58	0.08	0.40	0.22	0.62	0.15	0.18	0.32	8,286.93
Demolition 01/01/2012-12/31/2030	0.41	2.81	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.72
Fine Grading 01/01/2012-12/31/2030	1.13	7.80	5.34	0.00	48.96	0.31	49.26	10.22	0.28	10.51	1,609.92
Fine Grading Dust	0.00	0.00	0.00	0.00	48.95	0.00	48.95	10.22	0.00	10.22	0.00
Fine Grading Off Road Diesel	1.13	7.80	5.24	0.00	0.00	0.31	0.31	0.00	0.28	0.28	1,569.79
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.13

8/6/2009 05:00:32 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mmkaplan\Application Data\Urbemis\Version9a\Projects\MonroeDemoConMedium.urb924

Project Name: Fort Monroe Demolition Medium

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Demo/Construction Middle Bracket All Pollutants

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year mitigated)	3.87	23.58	52.97	0.05	33.86	1.16	35.02	7.11	1.05	8.16	6,939.52
2013 TOTALS (tons/year mitigated)	3.63	21.93	49.35	0.05	33.86	1.07	34.93	7.11	0.98	8.08	6,941.04
2014 TOTALS (tons/year mitigated)	3.37	20.24	46.05	0.05	33.86	0.98	34.83	7.11	0.89	7.99	6,942.48
2015 TOTALS (tons/year mitigated)	3.12	18.51	42.95	0.05	33.86	0.91	34.76	7.11	0.82	7.93	6,943.66
2016 TOTALS (tons/year mitigated)	2.91	16.96	40.20	0.05	33.86	0.83	34.69	7.11	0.75	7.86	6,944.42
2017 TOTALS (tons/year mitigated)	2.69	15.42	37.49	0.05	33.73	0.76	34.48	7.08	0.68	7.76	6,918.52
2018 TOTALS (tons/year mitigated)	2.49	14.12	35.30	0.05	33.86	0.69	34.54	7.11	0.62	7.73	6,945.75
2019 TOTALS (tons/year mitigated)	2.33	12.89	33.13	0.05	33.86	0.62	34.48	7.11	0.56	7.66	6,946.33
2020 TOTALS (tons/year mitigated)	2.17	11.82	31.22	0.05	33.99	0.57	34.56	7.13	0.52	7.65	6,973.50
2021 TOTALS (tons/year mitigated)	1.91	11.12	24.12	0.05	33.86	0.56	34.42	7.11	0.50	7.61	6,949.26
2022 TOTALS (tons/year mitigated)	1.90	11.08	24.03	0.05	33.73	0.56	34.29	7.08	0.50	7.58	6,922.64
2023 TOTALS (tons/year mitigated)	1.90	11.08	24.03	0.05	33.73	0.56	34.29	7.08	0.50	7.58	6,922.64
2024 TOTALS (tons/year mitigated)	1.92	11.16	24.22	0.05	33.99	0.56	34.55	7.13	0.51	7.64	6,975.89
2025 TOTALS (tons/year mitigated)	1.91	11.12	24.12	0.05	33.86	0.56	34.42	7.11	0.50	7.61	6,949.26
2026 TOTALS (tons/year mitigated)	1.78	10.81	20.37	0.05	33.86	0.56	34.41	7.11	0.50	7.61	6,951.48
2027 TOTALS (tons/year mitigated)	1.78	10.81	20.37	0.05	33.86	0.56	34.41	7.11	0.50	7.61	6,951.48
2028 TOTALS (tons/year mitigated)	1.77	10.77	20.29	0.05	33.73	0.56	34.28	7.08	0.50	7.58	6,924.85
2029 TOTALS (tons/year mitigated)	1.78	10.81	20.37	0.05	33.86	0.56	34.41	7.11	0.50	7.61	6,951.48
2030 TOTALS (tons/year mitigated)	1.78	10.81	20.37	0.05	33.86	0.56	34.41	7.11	0.50	7.61	6,951.48

8/6/2009 05:00:32 PM

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012	3.87	23.58	52.97	0.05	33.86	1.16	35.02	7.11	1.05	8.16	6,939.52
Building 01/01/2012-12/31/2030	1.91	7.23	43.87	0.05	0.23	0.40	0.63	0.08	0.35	0.43	5,196.22
Building Off Road Diesel	0.45	2.67	1.78	0.00	0.00	0.19	0.19	0.00	0.17	0.17	294.84
Building Vendor Trips	0.20	2.43	2.05	0.01	0.02	0.09	0.11	0.01	0.09	0.09	566.51
Building Worker Trips	1.26	2.14	40.05	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,334.88
Demolition 01/01/2012-12/31/2030	0.66	5.38	3.30	0.00	0.00	0.25	0.25	0.00	0.23	0.23	555.96
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.65	5.37	3.14	0.00	0.00	0.25	0.25	0.00	0.23	0.23	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.68
Fine Grading 01/01/2012-12/31/2030	1.31	10.97	5.80	0.00	33.62	0.51	34.14	7.02	0.47	7.50	1,187.34
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	1.30	10.95	5.49	0.00	0.00	0.51	0.51	0.00	0.47	0.47	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.02	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.35
2013	3.63	21.93	49.35	0.05	33.86	1.07	34.93	7.11	0.98	8.08	6,941.04
Building 01/01/2012-12/31/2030	1.74	6.59	40.68	0.05	0.23	0.36	0.60	0.08	0.32	0.41	5,197.71
Building Off Road Diesel	0.42	2.48	1.74	0.00	0.00	0.17	0.17	0.00	0.15	0.15	294.84
Building Vendor Trips	0.18	2.15	1.90	0.01	0.02	0.08	0.10	0.01	0.08	0.08	566.55
Building Worker Trips	1.15	1.95	37.04	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,336.32
Demolition 01/01/2012-12/31/2030	0.63	5.06	3.16	0.00	0.00	0.24	0.24	0.00	0.22	0.22	555.97
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.63	5.06	3.02	0.00	0.00	0.23	0.23	0.00	0.22	0.22	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.68
Fine Grading 01/01/2012-12/31/2030	1.25	10.27	5.51	0.00	33.62	0.47	34.10	7.02	0.44	7.46	1,187.36
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	1.24	10.26	5.23	0.00	0.00	0.47	0.47	0.00	0.44	0.44	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.02	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.36

8/6/2009 05:00:32 PM

2014	3.37	20.24	46.05	0.05	33.86	0.98	34.83	7.11	0.89	7.99	6,942.48
Building 01/01/2012-12/31/2030	1.59	5.98	37.72	0.05	0.23	0.33	0.57	0.08	0.29	0.38	5,199.14
Building Off Road Diesel	0.38	2.30	1.70	0.00	0.00	0.14	0.14	0.00	0.13	0.13	294.84
Building Vendor Trips	0.17	1.90	1.76	0.01	0.02	0.07	0.10	0.01	0.07	0.07	566.60
Building Worker Trips	1.04	1.79	34.26	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,337.70
Demolition 01/01/2012-12/31/2030	0.60	4.73	3.04	0.00	0.00	0.21	0.21	0.00	0.20	0.20	555.97
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.60	4.72	2.91	0.00	0.00	0.21	0.21	0.00	0.19	0.19	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.69
Fine Grading 01/01/2012-12/31/2030	1.18	9.53	5.29	0.00	33.62	0.43	34.05	7.02	0.40	7.42	1,187.37
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	1.18	9.51	5.02	0.00	0.00	0.43	0.43	0.00	0.40	0.40	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.37
2015	3.12	18.51	42.95	0.05	33.86	0.91	34.76	7.11	0.82	7.93	6,943.66
Building 01/01/2012-12/31/2030	1.45	5.41	34.97	0.05	0.23	0.32	0.55	0.08	0.28	0.36	5,200.31
Building Off Road Diesel	0.35	2.11	1.67	0.00	0.00	0.13	0.13	0.00	0.12	0.12	294.84
Building Vendor Trips	0.15	1.67	1.63	0.01	0.02	0.07	0.09	0.01	0.06	0.07	566.65
Building Worker Trips	0.95	1.63	31.67	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,338.82
Demolition 01/01/2012-12/31/2030	0.56	4.36	2.92	0.00	0.00	0.20	0.20	0.00	0.18	0.18	555.98
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.56	4.35	2.80	0.00	0.00	0.20	0.20	0.00	0.18	0.18	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.69
Fine Grading 01/01/2012-12/31/2030	1.11	8.75	5.06	0.00	33.62	0.40	34.02	7.02	0.36	7.39	1,187.38
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	1.10	8.74	4.82	0.00	0.00	0.39	0.39	0.00	0.36	0.36	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.38

8/6/2009 05:00:32 PM

2016	2.91	16.96	40.20	0.05	33.86	0.83	34.69	7.11	0.75	7.86	6,944.42
Building 01/01/2012-12/31/2030	1.33	4.91	32.51	0.05	0.23	0.29	0.52	0.08	0.25	0.34	5,201.06
Building Off Road Diesel	0.32	1.94	1.65	0.00	0.00	0.11	0.11	0.00	0.11	0.11	294.84
Building Vendor Trips	0.14	1.47	1.52	0.01	0.02	0.06	0.08	0.01	0.05	0.06	566.68
Building Worker Trips	0.87	1.50	29.34	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,339.54
Demolition 01/01/2012-12/31/2030	0.53	4.01	2.81	0.00	0.00	0.18	0.18	0.00	0.17	0.17	555.98
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.52	4.01	2.70	0.00	0.00	0.18	0.18	0.00	0.17	0.17	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.69
Fine Grading 01/01/2012-12/31/2030	1.05	8.04	4.88	0.00	33.62	0.36	33.98	7.02	0.33	7.35	1,187.38
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	1.04	8.02	4.66	0.00	0.00	0.36	0.36	0.00	0.33	0.33	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.39
2017	2.69	15.42	37.49	0.05	33.73	0.76	34.48	7.08	0.68	7.76	6,918.52
Building 01/01/2012-12/31/2030	1.21	4.43	30.09	0.05	0.23	0.27	0.50	0.08	0.23	0.32	5,181.83
Building Off Road Diesel	0.29	1.77	1.62	0.00	0.00	0.10	0.10	0.00	0.09	0.09	293.71
Building Vendor Trips	0.13	1.30	1.41	0.01	0.02	0.05	0.07	0.01	0.05	0.05	564.55
Building Worker Trips	0.79	1.37	27.06	0.04	0.21	0.11	0.33	0.08	0.09	0.17	4,323.58
Demolition 01/01/2012-12/31/2030	0.50	3.66	2.71	0.00	0.00	0.17	0.17	0.00	0.15	0.15	553.85
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.50	3.66	2.60	0.00	0.00	0.17	0.17	0.00	0.15	0.15	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.63
Fine Grading 01/01/2012-12/31/2030	0.98	7.33	4.69	0.00	33.49	0.32	33.82	7.00	0.30	7.29	1,182.84
Fine Grading Dust	0.00	0.00	0.00	0.00	33.49	0.00	33.49	6.99	0.00	6.99	0.00
Fine Grading Off Road Diesel	0.98	7.32	4.48	0.00	0.00	0.32	0.32	0.00	0.30	0.30	1,149.57
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.26

8/6/2009 05:00:32 PM

2018	2.49	14.12	35.30	0.05	33.86	0.69	34.54	7.11	0.62	7.73	6,945.75
Building 01/01/2012-12/31/2030	1.10	4.04	28.09	0.05	0.23	0.25	0.48	0.08	0.22	0.30	5,202.38
Building Off Road Diesel	0.27	1.63	1.60	0.00	0.00	0.09	0.09	0.00	0.08	0.08	294.84
Building Vendor Trips	0.12	1.16	1.32	0.01	0.02	0.05	0.07	0.01	0.04	0.05	566.75
Building Worker Trips	0.72	1.26	25.17	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,340.79
Demolition 01/01/2012-12/31/2030	0.47	3.36	2.63	0.00	0.00	0.15	0.15	0.00	0.14	0.14	555.98
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.47	3.36	2.54	0.00	0.00	0.15	0.15	0.00	0.14	0.14	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.70
Fine Grading 01/01/2012-12/31/2030	0.92	6.72	4.57	0.00	33.62	0.29	33.91	7.02	0.26	7.29	1,187.39
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	0.91	6.71	4.37	0.00	0.00	0.29	0.29	0.00	0.26	0.26	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.40
2019	2.33	12.89	33.13	0.05	33.86	0.62	34.48	7.11	0.56	7.66	6,946.33
Building 01/01/2012-12/31/2030	1.01	3.68	26.14	0.05	0.23	0.23	0.47	0.08	0.20	0.28	5,202.95
Building Off Road Diesel	0.25	1.49	1.58	0.00	0.00	0.07	0.07	0.00	0.07	0.07	294.84
Building Vendor Trips	0.11	1.04	1.24	0.01	0.02	0.04	0.06	0.01	0.04	0.05	566.79
Building Worker Trips	0.66	1.16	23.32	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,341.33
Demolition 01/01/2012-12/31/2030	0.44	3.08	2.56	0.00	0.00	0.13	0.13	0.00	0.12	0.12	555.99
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.44	3.07	2.47	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.70
Fine Grading 01/01/2012-12/31/2030	0.87	6.13	4.44	0.00	33.62	0.25	33.88	7.02	0.23	7.26	1,187.39
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	0.87	6.12	4.26	0.00	0.00	0.25	0.25	0.00	0.23	0.23	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.40

8/6/2009 05:00:32 PM

2020	2.17	11.82	31.22	0.05	33.99	0.57	34.56	7.13	0.52	7.65	6,973.50
Building 01/01/2012-12/31/2030	0.93	3.38	24.37	0.05	0.23	0.22	0.45	0.08	0.19	0.27	5,223.43
Building Off Road Diesel	0.22	1.38	1.58	0.00	0.00	0.07	0.07	0.00	0.06	0.06	295.97
Building Vendor Trips	0.10	0.94	1.17	0.01	0.02	0.04	0.06	0.01	0.04	0.04	568.99
Building Worker Trips	0.60	1.07	21.62	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,358.47
Demolition 01/01/2012-12/31/2030	0.42	2.83	2.50	0.00	0.00	0.13	0.13	0.00	0.12	0.12	558.12
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.82	2.42	0.00	0.00	0.13	0.13	0.00	0.12	0.12	541.35
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.77
Fine Grading 01/01/2012-12/31/2030	0.82	5.61	4.35	0.00	33.75	0.23	33.98	7.05	0.21	7.26	1,191.95
Fine Grading Dust	0.00	0.00	0.00	0.00	33.75	0.00	33.75	7.05	0.00	7.05	0.00
Fine Grading Off Road Diesel	0.82	5.61	4.18	0.00	0.00	0.23	0.23	0.00	0.21	0.21	1,158.42
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.53
2021	1.91	11.12	24.12	0.05	33.86	0.56	34.42	7.11	0.50	7.61	6,949.26
Building 01/01/2012-12/31/2030	0.68	2.71	17.38	0.05	0.23	0.21	0.44	0.08	0.18	0.26	5,205.85
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.08	0.64	0.91	0.01	0.02	0.03	0.05	0.01	0.03	0.03	566.95
Building Worker Trips	0.38	0.71	14.90	0.04	0.21	0.11	0.33	0.08	0.09	0.17	4,344.06
Demolition 01/01/2012-12/31/2030	0.41	2.82	2.47	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.71
Fine Grading 01/01/2012-12/31/2030	0.82	5.59	4.28	0.00	33.62	0.23	33.85	7.02	0.21	7.23	1,187.42
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.42

8/6/2009 05:00:32 PM

2022	1.90	11.08	24.03	0.05	33.73	0.56	34.29	7.08	0.50	7.58	6,922.64
Building 01/01/2012-12/31/2030	0.68	2.70	17.31	0.05	0.23	0.21	0.44	0.08	0.18	0.26	5,185.91
Building Off Road Diesel	0.22	1.36	1.56	0.00	0.00	0.06	0.06	0.00	0.06	0.06	293.71
Building Vendor Trips	0.08	0.64	0.90	0.01	0.02	0.03	0.05	0.01	0.03	0.03	564.78
Building Worker Trips	0.38	0.70	14.84	0.04	0.21	0.11	0.33	0.08	0.09	0.17	4,327.42
Demolition 01/01/2012-12/31/2030	0.41	2.80	2.46	0.00	0.00	0.13	0.13	0.00	0.12	0.12	553.87
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.80	2.40	0.00	0.00	0.13	0.13	0.00	0.12	0.12	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.65
Fine Grading 01/01/2012-12/31/2030	0.81	5.57	4.26	0.00	33.49	0.22	33.72	7.00	0.21	7.20	1,182.87
Fine Grading Dust	0.00	0.00	0.00	0.00	33.49	0.00	33.49	6.99	0.00	6.99	0.00
Fine Grading Off Road Diesel	0.81	5.56	4.15	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,149.57
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.29
2023	1.90	11.08	24.03	0.05	33.73	0.56	34.29	7.08	0.50	7.58	6,922.64
Building 01/01/2012-12/31/2030	0.68	2.70	17.31	0.05	0.23	0.21	0.44	0.08	0.18	0.26	5,185.91
Building Off Road Diesel	0.22	1.36	1.56	0.00	0.00	0.06	0.06	0.00	0.06	0.06	293.71
Building Vendor Trips	0.08	0.64	0.90	0.01	0.02	0.03	0.05	0.01	0.03	0.03	564.78
Building Worker Trips	0.38	0.70	14.84	0.04	0.21	0.11	0.33	0.08	0.09	0.17	4,327.42
Demolition 01/01/2012-12/31/2030	0.41	2.80	2.46	0.00	0.00	0.13	0.13	0.00	0.12	0.12	553.87
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.80	2.40	0.00	0.00	0.13	0.13	0.00	0.12	0.12	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.65
Fine Grading 01/01/2012-12/31/2030	0.81	5.57	4.26	0.00	33.49	0.22	33.72	7.00	0.21	7.20	1,182.87
Fine Grading Dust	0.00	0.00	0.00	0.00	33.49	0.00	33.49	6.99	0.00	6.99	0.00
Fine Grading Off Road Diesel	0.81	5.56	4.15	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,149.57
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.29

8/6/2009 05:00:32 PM

2024	1.92	11.16	24.22	0.05	33.99	0.56	34.55	7.13	0.51	7.64	6,975.89
Building 01/01/2012-12/31/2030	0.68	2.73	17.44	0.05	0.23	0.21	0.44	0.08	0.18	0.26	5,225.80
Building Off Road Diesel	0.22	1.38	1.58	0.00	0.00	0.07	0.07	0.00	0.06	0.06	295.97
Building Vendor Trips	0.08	0.64	0.91	0.01	0.02	0.03	0.05	0.01	0.03	0.03	569.13
Building Worker Trips	0.38	0.71	14.96	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,360.70
Demolition 01/01/2012-12/31/2030	0.42	2.83	2.48	0.00	0.00	0.13	0.13	0.00	0.12	0.12	558.13
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.82	2.42	0.00	0.00	0.13	0.13	0.00	0.12	0.12	541.35
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.77
Fine Grading 01/01/2012-12/31/2030	0.82	5.61	4.29	0.00	33.75	0.23	33.98	7.05	0.21	7.26	1,191.97
Fine Grading Dust	0.00	0.00	0.00	0.00	33.75	0.00	33.75	7.05	0.00	7.05	0.00
Fine Grading Off Road Diesel	0.82	5.61	4.18	0.00	0.00	0.23	0.23	0.00	0.21	0.21	1,158.42
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.55
2025	1.91	11.12	24.12	0.05	33.86	0.56	34.42	7.11	0.50	7.61	6,949.26
Building 01/01/2012-12/31/2030	0.68	2.71	17.38	0.05	0.23	0.21	0.44	0.08	0.18	0.26	5,205.85
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.08	0.64	0.91	0.01	0.02	0.03	0.05	0.01	0.03	0.03	566.95
Building Worker Trips	0.38	0.71	14.90	0.04	0.21	0.11	0.33	0.08	0.09	0.17	4,344.06
Demolition 01/01/2012-12/31/2030	0.41	2.82	2.47	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.71
Fine Grading 01/01/2012-12/31/2030	0.82	5.59	4.28	0.00	33.62	0.23	33.85	7.02	0.21	7.23	1,187.42
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.42

8/6/2009 05:00:32 PM

2026	1.78	10.81	20.37	0.05	33.86	0.56	34.41	7.11	0.50	7.61	6,951.48
Building 01/01/2012-12/31/2030	0.55	2.41	13.66	0.05	0.23	0.21	0.44	0.08	0.18	0.26	5,208.04
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.07	0.53	0.78	0.01	0.02	0.03	0.05	0.01	0.02	0.03	567.04
Building Worker Trips	0.26	0.50	11.32	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,346.17
Demolition 01/01/2012-12/31/2030	0.41	2.81	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.72
Fine Grading 01/01/2012-12/31/2030	0.81	5.59	4.25	0.00	33.62	0.23	33.85	7.02	0.21	7.23	1,187.43
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.44
2027	1.78	10.81	20.37	0.05	33.86	0.56	34.41	7.11	0.50	7.61	6,951.48
Building 01/01/2012-12/31/2030	0.55	2.41	13.66	0.05	0.23	0.21	0.44	0.08	0.18	0.26	5,208.04
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.07	0.53	0.78	0.01	0.02	0.03	0.05	0.01	0.02	0.03	567.04
Building Worker Trips	0.26	0.50	11.32	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,346.17
Demolition 01/01/2012-12/31/2030	0.41	2.81	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.72
Fine Grading 01/01/2012-12/31/2030	0.81	5.59	4.25	0.00	33.62	0.23	33.85	7.02	0.21	7.23	1,187.43
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.44

8/6/2009 05:00:32 PM

2028	1.77	10.77	20.29	0.05	33.73	0.56	34.28	7.08	0.50	7.58	6,924.85
Building 01/01/2012-12/31/2030	0.55	2.40	13.61	0.05	0.23	0.21	0.44	0.08	0.18	0.26	5,188.09
Building Off Road Diesel	0.22	1.36	1.56	0.00	0.00	0.06	0.06	0.00	0.06	0.06	293.71
Building Vendor Trips	0.07	0.53	0.78	0.01	0.02	0.03	0.05	0.01	0.02	0.03	564.87
Building Worker Trips	0.26	0.50	11.27	0.04	0.21	0.11	0.33	0.08	0.09	0.17	4,329.51
Demolition 01/01/2012-12/31/2030	0.41	2.80	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	553.87
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.80	2.40	0.00	0.00	0.13	0.13	0.00	0.12	0.12	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.65
Fine Grading 01/01/2012-12/31/2030	0.81	5.57	4.23	0.00	33.49	0.22	33.72	7.00	0.21	7.20	1,182.88
Fine Grading Dust	0.00	0.00	0.00	0.00	33.49	0.00	33.49	6.99	0.00	6.99	0.00
Fine Grading Off Road Diesel	0.81	5.56	4.15	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,149.57
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.31
2029	1.78	10.81	20.37	0.05	33.86	0.56	34.41	7.11	0.50	7.61	6,951.48
Building 01/01/2012-12/31/2030	0.55	2.41	13.66	0.05	0.23	0.21	0.44	0.08	0.18	0.26	5,208.04
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.07	0.53	0.78	0.01	0.02	0.03	0.05	0.01	0.02	0.03	567.04
Building Worker Trips	0.26	0.50	11.32	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,346.17
Demolition 01/01/2012-12/31/2030	0.41	2.81	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.72
Fine Grading 01/01/2012-12/31/2030	0.81	5.59	4.25	0.00	33.62	0.23	33.85	7.02	0.21	7.23	1,187.43
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.44

8/6/2009 05:00:32 PM

2030	1.78	10.81	20.37	0.05	33.86	0.56	34.41	7.11	0.50	7.61	6,951.48
Building 01/01/2012-12/31/2030	0.55	2.41	13.66	0.05	0.23	0.21	0.44	0.08	0.18	0.26	5,208.04
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.07	0.53	0.78	0.01	0.02	0.03	0.05	0.01	0.02	0.03	567.04
Building Worker Trips	0.26	0.50	11.32	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,346.17
Demolition 01/01/2012-12/31/2030	0.41	2.81	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.72
Fine Grading 01/01/2012-12/31/2030	0.81	5.59	4.25	0.00	33.62	0.23	33.85	7.02	0.21	7.23	1,187.43
Fine Grading Dust	0.00	0.00	0.00	0.00	33.62	0.00	33.62	7.02	0.00	7.02	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.44

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/1/2012 - 12/31/2030 - Type Your Description Here

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

8/6/2009 05:03:06 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mmkaplan\Application Data\Urbemis\Version9a\Projects\MonroeDemoConUpper.urb924

Project Name: Fort Monroe Demolition Upper

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Demo/Construction Upper
Bracket All Pollutants

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year mitigated)	3.96	24.51	54.22	0.05	38.10	1.20	39.30	7.99	1.09	9.08	7,202.87
2013 TOTALS (tons/year mitigated)	3.71	22.75	50.51	0.05	38.10	1.11	39.21	7.99	1.00	9.00	7,204.42
2014 TOTALS (tons/year mitigated)	3.45	20.97	47.12	0.05	38.10	1.01	39.10	7.99	0.91	8.91	7,205.89
2015 TOTALS (tons/year mitigated)	3.19	19.15	43.95	0.05	38.10	0.93	39.03	7.99	0.84	8.84	7,207.10
2016 TOTALS (tons/year mitigated)	2.97	17.52	41.12	0.05	38.10	0.85	38.95	7.99	0.77	8.76	7,207.88
2017 TOTALS (tons/year mitigated)	2.75	15.92	38.34	0.05	37.95	0.78	38.73	7.96	0.70	8.66	7,181.00
2018 TOTALS (tons/year mitigated)	2.55	14.57	36.09	0.05	38.10	0.71	38.81	7.99	0.64	8.63	7,209.26
2019 TOTALS (tons/year mitigated)	2.37	13.29	33.88	0.05	38.10	0.64	38.74	7.99	0.57	8.57	7,209.86
2020 TOTALS (tons/year mitigated)	2.21	12.18	31.92	0.05	38.24	0.59	38.84	8.02	0.53	8.55	7,238.05
2021 TOTALS (tons/year mitigated)	1.94	11.37	24.64	0.05	38.10	0.57	38.67	7.99	0.51	8.51	7,212.88
2022 TOTALS (tons/year mitigated)	1.93	11.32	24.55	0.05	37.95	0.57	38.52	7.96	0.51	8.48	7,185.25
2023 TOTALS (tons/year mitigated)	1.93	11.32	24.55	0.05	37.95	0.57	38.52	7.96	0.51	8.48	7,185.25
2024 TOTALS (tons/year mitigated)	1.95	11.41	24.74	0.05	38.24	0.58	38.82	8.02	0.52	8.54	7,240.52
2025 TOTALS (tons/year mitigated)	1.94	11.37	24.64	0.05	38.10	0.57	38.67	7.99	0.51	8.51	7,212.88
2026 TOTALS (tons/year mitigated)	1.80	11.02	20.79	0.05	38.10	0.57	38.67	7.99	0.51	8.50	7,215.16
2027 TOTALS (tons/year mitigated)	1.80	11.02	20.79	0.05	38.10	0.57	38.67	7.99	0.51	8.50	7,215.16
2028 TOTALS (tons/year mitigated)	1.80	10.97	20.71	0.05	37.95	0.57	38.52	7.96	0.51	8.47	7,187.51
2029 TOTALS (tons/year mitigated)	1.80	11.02	20.79	0.05	38.10	0.57	38.67	7.99	0.51	8.50	7,215.16
2030 TOTALS (tons/year mitigated)	1.80	11.02	20.79	0.05	38.10	0.57	38.67	7.99	0.51	8.50	7,215.16

8/6/2009 05:03:06 PM

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012	3.96	24.51	54.22	0.05	38.10	1.20	39.30	7.99	1.09	9.08	7,202.87
Building 01/01/2012-12/31/2030	2.00	8.16	45.12	0.05	0.24	0.43	0.67	0.09	0.38	0.47	5,459.57
Building Off Road Diesel	0.45	2.67	1.78	0.00	0.00	0.19	0.19	0.00	0.17	0.17	294.84
Building Vendor Trips	0.27	3.33	2.78	0.01	0.03	0.13	0.16	0.01	0.12	0.13	774.18
Building Worker Trips	1.27	2.16	40.56	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,390.55
Demolition 01/01/2012-12/31/2030	0.66	5.38	3.30	0.00	0.00	0.25	0.25	0.00	0.23	0.23	555.96
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.65	5.37	3.14	0.00	0.00	0.25	0.25	0.00	0.23	0.23	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.68
Fine Grading 01/01/2012-12/31/2030	1.31	10.97	5.80	0.00	37.85	0.51	38.37	7.91	0.47	8.38	1,187.34
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	1.30	10.95	5.49	0.00	0.00	0.51	0.51	0.00	0.47	0.47	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.02	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.35
2013	3.71	22.75	50.51	0.05	38.10	1.11	39.21	7.99	1.00	9.00	7,204.42
Building 01/01/2012-12/31/2030	1.83	7.41	41.83	0.05	0.24	0.40	0.64	0.09	0.35	0.44	5,461.10
Building Off Road Diesel	0.42	2.48	1.74	0.00	0.00	0.17	0.17	0.00	0.15	0.15	294.84
Building Vendor Trips	0.25	2.95	2.58	0.01	0.03	0.12	0.14	0.01	0.11	0.11	774.24
Building Worker Trips	1.16	1.98	37.51	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,392.02
Demolition 01/01/2012-12/31/2030	0.63	5.06	3.16	0.00	0.00	0.24	0.24	0.00	0.22	0.22	555.97
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.63	5.06	3.02	0.00	0.00	0.23	0.23	0.00	0.22	0.22	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.68
Fine Grading 01/01/2012-12/31/2030	1.25	10.27	5.51	0.00	37.85	0.47	38.33	7.91	0.44	8.34	1,187.36
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	1.24	10.26	5.23	0.00	0.00	0.47	0.47	0.00	0.44	0.44	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.02	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.36

8/6/2009 05:03:06 PM

2014	3.45	20.97	47.12	0.05	38.10	1.01	39.10	7.99	0.91	8.91	7,205.89
Building 01/01/2012-12/31/2030	1.66	6.71	38.79	0.05	0.24	0.36	0.61	0.09	0.32	0.41	5,462.55
Building Off Road Diesel	0.38	2.30	1.70	0.00	0.00	0.14	0.14	0.00	0.13	0.13	294.84
Building Vendor Trips	0.23	2.60	2.39	0.01	0.03	0.10	0.13	0.01	0.09	0.10	774.30
Building Worker Trips	1.06	1.81	34.70	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,393.41
Demolition 01/01/2012-12/31/2030	0.60	4.73	3.04	0.00	0.00	0.21	0.21	0.00	0.20	0.20	555.97
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.60	4.72	2.91	0.00	0.00	0.21	0.21	0.00	0.19	0.19	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.69
Fine Grading 01/01/2012-12/31/2030	1.18	9.53	5.29	0.00	37.85	0.43	38.29	7.91	0.40	8.30	1,187.37
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	1.18	9.51	5.02	0.00	0.00	0.43	0.43	0.00	0.40	0.40	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.37
2015	3.19	19.15	43.95	0.05	38.10	0.93	39.03	7.99	0.84	8.84	7,207.10
Building 01/01/2012-12/31/2030	1.52	6.05	35.96	0.05	0.24	0.34	0.58	0.09	0.30	0.39	5,463.75
Building Off Road Diesel	0.35	2.11	1.67	0.00	0.00	0.13	0.13	0.00	0.12	0.12	294.84
Building Vendor Trips	0.21	2.28	2.21	0.01	0.03	0.09	0.12	0.01	0.08	0.09	774.37
Building Worker Trips	0.96	1.65	32.08	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,394.55
Demolition 01/01/2012-12/31/2030	0.56	4.36	2.92	0.00	0.00	0.20	0.20	0.00	0.18	0.18	555.98
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.56	4.35	2.80	0.00	0.00	0.20	0.20	0.00	0.18	0.18	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.69
Fine Grading 01/01/2012-12/31/2030	1.11	8.75	5.06	0.00	37.85	0.40	38.25	7.91	0.36	8.27	1,187.38
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	1.10	8.74	4.82	0.00	0.00	0.39	0.39	0.00	0.36	0.36	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.38

8/6/2009 05:03:06 PM

2016	2.97	17.52	41.12	0.05	38.10	0.85	38.95	7.99	0.77	8.76	7,207.88
Building 01/01/2012-12/31/2030	1.40	5.47	33.43	0.05	0.24	0.31	0.56	0.09	0.27	0.36	5,464.52
Building Off Road Diesel	0.32	1.94	1.65	0.00	0.00	0.11	0.11	0.00	0.11	0.11	294.84
Building Vendor Trips	0.19	2.01	2.06	0.01	0.03	0.08	0.11	0.01	0.07	0.08	774.42
Building Worker Trips	0.89	1.52	29.72	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,395.27
Demolition 01/01/2012-12/31/2030	0.53	4.01	2.81	0.00	0.00	0.18	0.18	0.00	0.17	0.17	555.98
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.52	4.01	2.70	0.00	0.00	0.18	0.18	0.00	0.17	0.17	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.69
Fine Grading 01/01/2012-12/31/2030	1.05	8.04	4.88	0.00	37.85	0.36	38.21	7.91	0.33	8.24	1,187.38
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	1.04	8.02	4.66	0.00	0.00	0.36	0.36	0.00	0.33	0.33	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.39
2017	2.75	15.92	38.34	0.05	37.95	0.78	38.73	7.96	0.70	8.66	7,181.00
Building 01/01/2012-12/31/2030	1.26	4.93	30.94	0.05	0.24	0.29	0.53	0.09	0.25	0.34	5,444.31
Building Off Road Diesel	0.29	1.77	1.62	0.00	0.00	0.10	0.10	0.00	0.09	0.09	293.71
Building Vendor Trips	0.17	1.78	1.91	0.01	0.03	0.07	0.10	0.01	0.07	0.08	771.50
Building Worker Trips	0.80	1.39	27.41	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,379.11
Demolition 01/01/2012-12/31/2030	0.50	3.66	2.71	0.00	0.00	0.17	0.17	0.00	0.15	0.15	553.85
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.50	3.66	2.60	0.00	0.00	0.17	0.17	0.00	0.15	0.15	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.63
Fine Grading 01/01/2012-12/31/2030	0.98	7.33	4.69	0.00	37.71	0.32	38.03	7.88	0.30	8.17	1,182.84
Fine Grading Dust	0.00	0.00	0.00	0.00	37.71	0.00	37.71	7.87	0.00	7.87	0.00
Fine Grading Off Road Diesel	0.98	7.32	4.48	0.00	0.00	0.32	0.32	0.00	0.30	0.30	1,149.57
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.26

8/6/2009 05:03:06 PM

2018	2.55	14.57	36.09	0.05	38.10	0.71	38.81	7.99	0.64	8.63	7,209.26
Building 01/01/2012-12/31/2030	1.16	4.49	28.89	0.05	0.24	0.27	0.51	0.09	0.23	0.32	5,465.88
Building Off Road Diesel	0.27	1.63	1.60	0.00	0.00	0.09	0.09	0.00	0.08	0.08	294.84
Building Vendor Trips	0.16	1.59	1.80	0.01	0.03	0.07	0.09	0.01	0.06	0.07	774.51
Building Worker Trips	0.73	1.28	25.49	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,396.53
Demolition 01/01/2012-12/31/2030	0.47	3.36	2.63	0.00	0.00	0.15	0.15	0.00	0.14	0.14	555.98
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.47	3.36	2.54	0.00	0.00	0.15	0.15	0.00	0.14	0.14	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.70
Fine Grading 01/01/2012-12/31/2030	0.92	6.72	4.57	0.00	37.85	0.29	38.14	7.91	0.26	8.17	1,187.39
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	0.91	6.71	4.37	0.00	0.00	0.29	0.29	0.00	0.26	0.26	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.40
2019	2.37	13.29	33.88	0.05	38.10	0.64	38.74	7.99	0.57	8.57	7,209.86
Building 01/01/2012-12/31/2030	1.06	4.08	26.88	0.05	0.24	0.25	0.49	0.09	0.22	0.30	5,466.48
Building Off Road Diesel	0.25	1.49	1.58	0.00	0.00	0.07	0.07	0.00	0.07	0.07	294.84
Building Vendor Trips	0.15	1.42	1.68	0.01	0.03	0.06	0.09	0.01	0.05	0.06	774.56
Building Worker Trips	0.67	1.17	23.61	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,397.08
Demolition 01/01/2012-12/31/2030	0.44	3.08	2.56	0.00	0.00	0.13	0.13	0.00	0.12	0.12	555.99
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.44	3.07	2.47	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.70
Fine Grading 01/01/2012-12/31/2030	0.87	6.13	4.44	0.00	37.85	0.25	38.11	7.91	0.23	8.14	1,187.39
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	0.87	6.12	4.26	0.00	0.00	0.25	0.25	0.00	0.23	0.23	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.40

8/6/2009 05:03:06 PM

2020	2.21	12.18	31.92	0.05	38.24	0.59	38.84	8.02	0.53	8.55	7,238.05
Building 01/01/2012-12/31/2030	0.97	3.74	25.07	0.05	0.24	0.24	0.48	0.09	0.20	0.29	5,487.99
Building Off Road Diesel	0.22	1.38	1.58	0.00	0.00	0.07	0.07	0.00	0.06	0.06	295.97
Building Vendor Trips	0.14	1.29	1.59	0.01	0.03	0.05	0.08	0.01	0.05	0.06	777.57
Building Worker Trips	0.61	1.08	21.90	0.04	0.22	0.12	0.33	0.08	0.10	0.17	4,414.45
Demolition 01/01/2012-12/31/2030	0.42	2.83	2.50	0.00	0.00	0.13	0.13	0.00	0.12	0.12	558.12
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.82	2.42	0.00	0.00	0.13	0.13	0.00	0.12	0.12	541.35
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.77
Fine Grading 01/01/2012-12/31/2030	0.82	5.61	4.35	0.00	38.00	0.23	38.23	7.94	0.21	8.14	1,191.95
Fine Grading Dust	0.00	0.00	0.00	0.00	38.00	0.00	38.00	7.94	0.00	7.94	0.00
Fine Grading Off Road Diesel	0.82	5.61	4.18	0.00	0.00	0.23	0.23	0.00	0.21	0.21	1,158.42
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.53
2021	1.94	11.37	24.64	0.05	38.10	0.57	38.67	7.99	0.51	8.51	7,212.88
Building 01/01/2012-12/31/2030	0.71	2.96	17.89	0.05	0.24	0.22	0.46	0.09	0.19	0.28	5,469.47
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.11	0.88	1.23	0.01	0.03	0.04	0.07	0.01	0.04	0.05	774.78
Building Worker Trips	0.38	0.72	15.09	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,399.85
Demolition 01/01/2012-12/31/2030	0.41	2.82	2.47	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.71
Fine Grading 01/01/2012-12/31/2030	0.82	5.59	4.28	0.00	37.85	0.23	38.08	7.91	0.21	8.11	1,187.42
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.42

8/6/2009 05:03:06 PM

2022	1.93	11.32	24.55	0.05	37.95	0.57	38.52	7.96	0.51	8.48	7,185.25
Building 01/01/2012-12/31/2030	0.71	2.95	17.83	0.05	0.24	0.22	0.46	0.09	0.19	0.28	5,448.51
Building Off Road Diesel	0.22	1.36	1.56	0.00	0.00	0.06	0.06	0.00	0.06	0.06	293.71
Building Vendor Trips	0.10	0.87	1.23	0.01	0.03	0.04	0.07	0.01	0.04	0.05	771.82
Building Worker Trips	0.38	0.71	15.03	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,382.99
Demolition 01/01/2012-12/31/2030	0.41	2.80	2.46	0.00	0.00	0.13	0.13	0.00	0.12	0.12	553.87
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.80	2.40	0.00	0.00	0.13	0.13	0.00	0.12	0.12	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.65
Fine Grading 01/01/2012-12/31/2030	0.81	5.57	4.26	0.00	37.71	0.22	37.93	7.88	0.21	8.08	1,182.87
Fine Grading Dust	0.00	0.00	0.00	0.00	37.71	0.00	37.71	7.87	0.00	7.87	0.00
Fine Grading Off Road Diesel	0.81	5.56	4.15	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,149.57
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.29
2023	1.93	11.32	24.55	0.05	37.95	0.57	38.52	7.96	0.51	8.48	7,185.25
Building 01/01/2012-12/31/2030	0.71	2.95	17.83	0.05	0.24	0.22	0.46	0.09	0.19	0.28	5,448.51
Building Off Road Diesel	0.22	1.36	1.56	0.00	0.00	0.06	0.06	0.00	0.06	0.06	293.71
Building Vendor Trips	0.10	0.87	1.23	0.01	0.03	0.04	0.07	0.01	0.04	0.05	771.82
Building Worker Trips	0.38	0.71	15.03	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,382.99
Demolition 01/01/2012-12/31/2030	0.41	2.80	2.46	0.00	0.00	0.13	0.13	0.00	0.12	0.12	553.87
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.80	2.40	0.00	0.00	0.13	0.13	0.00	0.12	0.12	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.65
Fine Grading 01/01/2012-12/31/2030	0.81	5.57	4.26	0.00	37.71	0.22	37.93	7.88	0.21	8.08	1,182.87
Fine Grading Dust	0.00	0.00	0.00	0.00	37.71	0.00	37.71	7.87	0.00	7.87	0.00
Fine Grading Off Road Diesel	0.81	5.56	4.15	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,149.57
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.29

8/6/2009 05:03:06 PM

2024	1.95	11.41	24.74	0.05	38.24	0.58	38.82	8.02	0.52	8.54	7,240.52
Building 01/01/2012-12/31/2030	0.71	2.97	17.96	0.05	0.24	0.22	0.47	0.09	0.19	0.28	5,490.43
Building Off Road Diesel	0.22	1.38	1.58	0.00	0.00	0.07	0.07	0.00	0.06	0.06	295.97
Building Vendor Trips	0.11	0.88	1.24	0.01	0.03	0.04	0.07	0.01	0.04	0.05	777.75
Building Worker Trips	0.39	0.72	15.15	0.04	0.22	0.12	0.33	0.08	0.10	0.17	4,416.71
Demolition 01/01/2012-12/31/2030	0.42	2.83	2.48	0.00	0.00	0.13	0.13	0.00	0.12	0.12	558.13
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.82	2.42	0.00	0.00	0.13	0.13	0.00	0.12	0.12	541.35
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.77
Fine Grading 01/01/2012-12/31/2030	0.82	5.61	4.29	0.00	38.00	0.23	38.23	7.94	0.21	8.14	1,191.97
Fine Grading Dust	0.00	0.00	0.00	0.00	38.00	0.00	38.00	7.94	0.00	7.94	0.00
Fine Grading Off Road Diesel	0.82	5.61	4.18	0.00	0.00	0.23	0.23	0.00	0.21	0.21	1,158.42
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.55
2025	1.94	11.37	24.64	0.05	38.10	0.57	38.67	7.99	0.51	8.51	7,212.88
Building 01/01/2012-12/31/2030	0.71	2.96	17.89	0.05	0.24	0.22	0.46	0.09	0.19	0.28	5,469.47
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.11	0.88	1.23	0.01	0.03	0.04	0.07	0.01	0.04	0.05	774.78
Building Worker Trips	0.38	0.72	15.09	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,399.85
Demolition 01/01/2012-12/31/2030	0.41	2.82	2.47	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.71
Fine Grading 01/01/2012-12/31/2030	0.82	5.59	4.28	0.00	37.85	0.23	38.08	7.91	0.21	8.11	1,187.42
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.42

8/6/2009 05:03:06 PM

2026	1.80	11.02	20.79	0.05	38.10	0.57	38.67	7.99	0.51	8.50	7,215.16
Building 01/01/2012-12/31/2030	0.58	2.61	14.09	0.05	0.24	0.22	0.46	0.09	0.19	0.27	5,471.72
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.09	0.73	1.06	0.01	0.03	0.04	0.06	0.01	0.03	0.04	774.90
Building Worker Trips	0.26	0.51	11.46	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,401.98
Demolition 01/01/2012-12/31/2030	0.41	2.81	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.72
Fine Grading 01/01/2012-12/31/2030	0.81	5.59	4.25	0.00	37.85	0.23	38.08	7.91	0.21	8.11	1,187.43
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.44
2027	1.80	11.02	20.79	0.05	38.10	0.57	38.67	7.99	0.51	8.50	7,215.16
Building 01/01/2012-12/31/2030	0.58	2.61	14.09	0.05	0.24	0.22	0.46	0.09	0.19	0.27	5,471.72
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.09	0.73	1.06	0.01	0.03	0.04	0.06	0.01	0.03	0.04	774.90
Building Worker Trips	0.26	0.51	11.46	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,401.98
Demolition 01/01/2012-12/31/2030	0.41	2.81	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.72
Fine Grading 01/01/2012-12/31/2030	0.81	5.59	4.25	0.00	37.85	0.23	38.08	7.91	0.21	8.11	1,187.43
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.44

8/6/2009 05:03:06 PM

2028	1.80	10.97	20.71	0.05	37.95	0.57	38.52	7.96	0.51	8.47	7,187.51
Building 01/01/2012-12/31/2030	0.57	2.60	14.03	0.05	0.24	0.22	0.46	0.09	0.19	0.27	5,450.76
Building Off Road Diesel	0.22	1.36	1.56	0.00	0.00	0.06	0.06	0.00	0.06	0.06	293.71
Building Vendor Trips	0.09	0.73	1.05	0.01	0.03	0.04	0.06	0.01	0.03	0.04	771.93
Building Worker Trips	0.26	0.51	11.42	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,385.12
Demolition 01/01/2012-12/31/2030	0.41	2.80	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	553.87
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.80	2.40	0.00	0.00	0.13	0.13	0.00	0.12	0.12	537.22
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.65
Fine Grading 01/01/2012-12/31/2030	0.81	5.57	4.23	0.00	37.71	0.22	37.93	7.88	0.21	8.08	1,182.88
Fine Grading Dust	0.00	0.00	0.00	0.00	37.71	0.00	37.71	7.87	0.00	7.87	0.00
Fine Grading Off Road Diesel	0.81	5.56	4.15	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,149.57
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.31
2029	1.80	11.02	20.79	0.05	38.10	0.57	38.67	7.99	0.51	8.50	7,215.16
Building 01/01/2012-12/31/2030	0.58	2.61	14.09	0.05	0.24	0.22	0.46	0.09	0.19	0.27	5,471.72
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.09	0.73	1.06	0.01	0.03	0.04	0.06	0.01	0.03	0.04	774.90
Building Worker Trips	0.26	0.51	11.46	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,401.98
Demolition 01/01/2012-12/31/2030	0.41	2.81	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.72
Fine Grading 01/01/2012-12/31/2030	0.81	5.59	4.25	0.00	37.85	0.23	38.08	7.91	0.21	8.11	1,187.43
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.44

8/6/2009 05:03:06 PM

2030	1.80	11.02	20.79	0.05	38.10	0.57	38.67	7.99	0.51	8.50	7,215.16
Building 01/01/2012-12/31/2030	0.58	2.61	14.09	0.05	0.24	0.22	0.46	0.09	0.19	0.27	5,471.72
Building Off Road Diesel	0.22	1.37	1.57	0.00	0.00	0.06	0.06	0.00	0.06	0.06	294.84
Building Vendor Trips	0.09	0.73	1.06	0.01	0.03	0.04	0.06	0.01	0.03	0.04	774.90
Building Worker Trips	0.26	0.51	11.46	0.04	0.21	0.12	0.33	0.08	0.09	0.17	4,401.98
Demolition 01/01/2012-12/31/2030	0.41	2.81	2.45	0.00	0.00	0.13	0.13	0.00	0.12	0.12	556.00
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.41	2.81	2.41	0.00	0.00	0.13	0.13	0.00	0.12	0.12	539.29
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.72
Fine Grading 01/01/2012-12/31/2030	0.81	5.59	4.25	0.00	37.85	0.23	38.08	7.91	0.21	8.11	1,187.43
Fine Grading Dust	0.00	0.00	0.00	0.00	37.85	0.00	37.85	7.91	0.00	7.91	0.00
Fine Grading Off Road Diesel	0.81	5.58	4.16	0.00	0.00	0.22	0.22	0.00	0.21	0.21	1,153.99
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.44

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/1/2012 - 12/31/2030 - Type Your Description Here

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

12/23/2008 05:42:48 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mmkaplan\Application Data\Urbemis\Version9a\Projects\MonroeFutureLower.urb9

Project Name: Fort Monroe Future Lower

UrBemis Lower Bracket Future

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	5.18	1.18	13.38	0.03	1.75	1.69	1,475.37

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	3.61	3.54	35.92	0.08	15.59	2.97	8,758.63

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	8.79	4.72	49.30	0.11	17.34	4.66	10,234.00

12/23/2008 05:42:48 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.07	0.96	0.64	0.00	0.00	0.00	1,186.42
Hearth	2.06	0.20	10.84	0.03	1.74	1.68	285.75
Landscape	0.19	0.02	1.90	0.00	0.01	0.01	3.20
Consumer Products	2.23						
Architectural Coatings	0.63						
TOTALS (tons/year, unmitigated)	5.18	1.18	13.38	0.03	1.75	1.69	1,475.37

12/23/2008 05:42:48 PM

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.43	0.44	4.52	0.01	1.93	0.37	1,087.96
Condo/townhouse general	0.75	0.73	7.60	0.02	3.24	0.62	1,830.31
Place of worship	0.05	0.05	0.45	0.00	0.20	0.04	111.05
City park	0.52	0.34	3.38	0.01	1.49	0.28	832.53
Quality resturant	0.15	0.17	1.69	0.00	0.74	0.14	415.93
High turnover (sit-down) rest.	0.42	0.48	4.73	0.01	2.08	0.40	1,165.09
Hotel	0.26	0.26	2.61	0.01	1.15	0.22	641.68
Strip mall	0.10	0.11	1.13	0.00	0.50	0.09	278.44
Bank (with drive-through)	0.16	0.18	1.79	0.00	0.79	0.15	441.15
General office building	0.62	0.64	6.53	0.02	2.83	0.54	1,590.43
Warehouse	0.10	0.09	0.94	0.00	0.41	0.08	231.57
General light industry	0.05	0.05	0.55	0.00	0.23	0.04	132.49
TOTALS (tons/year, unmitigated)	3.61	3.54	35.92	0.08	15.59	2.97	8,758.63

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

12/23/2008 05:42:48 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	25.00	9.57	dwelling units	75.00	717.75	6,136.55
Condo/townhouse general	10.94	6.90	dwelling units	175.00	1,207.50	10,323.76
Place of worship		9.11	1000 sq ft	9.37	85.36	632.91
City park		1.59	acres	400.00	636.00	4,742.97
Quality resturant		89.95	1000 sq ft	3.50	314.82	2,368.11
High turnover (sit-down) rest.		127.15	1000 sq ft	7.00	890.05	6,637.55
Hotel		8.17	rooms	60.00	490.20	3,655.67
Strip mall		42.94	1000 sq ft	5.00	214.70	1,587.28
Bank (with drive-through)		246.49	1000 sq ft	1.38	340.16	2,514.77
General office building		11.01	1000 sq ft	101.00	1,112.01	9,010.06
Warehouse		4.96	1000 sq ft	36.00	178.56	1,320.09
General light industry		6.97	1000 sq ft	12.75	88.87	748.71
					6,275.98	49,678.43

12/23/2008 05:42:48 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	47.5	0.0	100.0	0.0
Light Truck < 3750 lbs	11.0	0.0	99.1	0.9
Light Truck 3751-5750 lbs	22.2	0.0	100.0	0.0
Med Truck 5751-8500 lbs	9.9	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.8	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	57.1	42.9
Med-Heavy Truck 14,001-33,000 lbs	1.1	0.0	18.2	81.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	34.3	65.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.1	0.0	90.9	9.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

12/23/2008 05:42:48 PM

% of Trips - Commercial (by land use)

Place of worship	3.0	1.5	95.5
City park	5.0	2.5	92.5
Quality resturant	8.0	4.0	88.0
High turnover (sit-down) rest.	5.0	2.5	92.5
Hotel	5.0	2.5	92.5
Strip mall	2.0	1.0	97.0
Bank (with drive-through)	2.0	1.0	97.0
General office building	35.0	17.5	47.5
Warehouse	2.0	1.0	97.0
General light industry	50.0	25.0	25.0

12/23/2008 05:41:06 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mmkaplan\Application Data\Urbemis\Version9a\Projects\MonroeFutureMedium.urb9

Project Name: Fort Monroe Future Medium

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

UrBemis Middle Bracket Future

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	26.19	4.63	61.63	0.17	9.07	8.73

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	14.28	14.47	147.38	0.35	63.70	12.17

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	40.47	19.10	209.01	0.52	72.77	20.90

12/23/2008 05:41:06 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.27	3.55	2.10	0.00	0.01	0.01
Hearth	10.71	1.05	56.38	0.17	9.05	8.71
Landscape	0.41	0.03	3.15	0.00	0.01	0.01
Consumer Products	11.61					
Architectural Coatings	3.19					
TOTALS (tons/year, unmitigated)	26.19	4.63	61.63	0.17	9.07	8.73

12/23/2008 05:41:06 PM

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	2.15	2.18	22.60	0.05	9.63	1.84
Condo/townhouse general	3.97	3.88	40.19	0.10	17.13	3.27
Place of worship	0.05	0.05	0.45	0.00	0.20	0.04
City park	0.28	0.18	1.79	0.00	0.79	0.15
Quality resturant	0.43	0.48	4.83	0.01	2.12	0.41
High turnover (sit-down) rest.	1.27	1.43	14.19	0.03	6.25	1.19
Hotel	0.70	0.70	6.95	0.02	3.06	0.58
Strip mall	0.62	0.68	6.77	0.02	2.99	0.57
Bank (with drive-through)	0.16	0.18	1.79	0.00	0.79	0.15
General office building	3.91	4.03	40.93	0.10	17.72	3.39
Warehouse	0.52	0.47	4.71	0.01	2.08	0.40
General light industry	0.22	0.21	2.18	0.01	0.94	0.18
TOTALS (tons/year, unmitigated)	14.28	14.47	147.38	0.35	63.70	12.17

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

12/23/2008 05:41:06 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	125.00	9.57	dwelling units	375.00	3,588.75	30,682.74
Condo/townhouse general	57.81	6.90	dwelling units	925.00	6,382.50	54,568.46
Place of worship		9.11	1000 sq ft	9.37	85.36	632.91
City park		1.59	acres	212.00	337.08	2,513.77
Quality resturant		89.95	1000 sq ft	10.00	899.50	6,766.04
High turnover (sit-down) rest.		127.15	1000 sq ft	21.00	2,670.15	19,912.64
Hotel		8.17	rooms	160.00	1,307.20	9,748.44
Strip mall		42.94	1000 sq ft	30.00	1,288.20	9,523.66
Bank (with drive-through)		246.49	1000 sq ft	1.38	340.16	2,514.77
General office building		11.01	1000 sq ft	633.00	6,969.33	56,469.00
Warehouse		4.96	1000 sq ft	180.50	895.28	6,618.81
General light industry		6.97	1000 sq ft	50.75	353.73	2,980.15
					25,117.24	202,931.39

12/23/2008 05:41:06 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	47.5	0.0	100.0	0.0
Light Truck < 3750 lbs	11.0	0.0	99.1	0.9
Light Truck 3751-5750 lbs	22.2	0.0	100.0	0.0
Med Truck 5751-8500 lbs	9.9	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.8	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	57.1	42.9
Med-Heavy Truck 14,001-33,000 lbs	1.1	0.0	18.2	81.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	34.3	65.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.1	0.0	90.9	9.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

12/23/2008 05:41:06 PM

% of Trips - Commercial (by land use)

Place of worship	3.0	1.5	95.5
City park	5.0	2.5	92.5
Quality resturant	8.0	4.0	88.0
High turnover (sit-down) rest.	5.0	2.5	92.5
Hotel	5.0	2.5	92.5
Strip mall	2.0	1.0	97.0
Bank (with drive-through)	2.0	1.0	97.0
General office building	35.0	17.5	47.5
Warehouse	2.0	1.0	97.0
General light industry	50.0	25.0	25.0

12/23/2008 05:38:56 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mmkaplan\Application Data\Urbemis\Version9a\Projects\MonroeFutureUpper.urb9

Project Name: Fort Monroe Future Upper

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

UrBemis Upper Bracket Future

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	30.34	5.38	71.06	0.20	10.46	10.07

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	16.94	17.28	175.67	0.43	75.91	14.50

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	47.28	22.66	246.73	0.63	86.37	24.57

12/23/2008 05:38:56 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.31	4.12	2.43	0.00	0.01	0.01
Hearth	12.36	1.22	65.06	0.20	10.44	10.05
Landscape	0.49	0.04	3.57	0.00	0.01	0.01
Consumer Products	13.39					
Architectural Coatings	3.79					
TOTALS (tons/year, unmitigated)	30.34	5.38	71.06	0.20	10.46	10.07

12/23/2008 05:38:56 PM

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	2.73	2.77	28.62	0.07	12.20	2.33
Condo/townhouse general	4.40	4.30	44.53	0.11	18.98	3.63
Place of worship	0.05	0.05	0.45	0.00	0.20	0.04
City park	0.25	0.17	1.65	0.00	0.73	0.14
Quality resturant	0.65	0.73	7.25	0.02	3.18	0.61
High turnover (sit-down) rest.	1.51	1.70	16.89	0.04	7.44	1.42
Hotel	0.70	0.70	6.95	0.02	3.06	0.58
Strip mall	0.82	0.91	9.03	0.02	3.98	0.76
Bank (with drive-through)	0.18	0.21	2.07	0.01	0.91	0.17
General office building	4.76	4.90	49.79	0.12	21.55	4.12
Warehouse	0.57	0.53	5.22	0.01	2.30	0.44
General light industry	0.32	0.31	3.22	0.01	1.38	0.26
TOTALS (tons/year, unmitigated)	16.94	17.28	175.67	0.43	75.91	14.50

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

12/23/2008 05:38:56 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	158.33	9.57	dwelling units	475.00	4,545.75	38,864.80
Condo/townhouse general	64.06	6.90	dwelling units	1,025.00	7,072.50	60,467.76
Place of worship		9.11	1000 sq ft	9.37	85.36	632.91
City park		1.59	acres	195.00	310.05	2,312.20
Quality resturant		89.95	1000 sq ft	15.00	1,349.25	10,149.06
High turnover (sit-down) rest.		127.15	1000 sq ft	25.00	3,178.75	23,705.53
Hotel		8.17	rooms	160.00	1,307.20	9,748.44
Strip mall		42.94	1000 sq ft	40.00	1,717.60	12,698.22
Bank (with drive-through)		246.49	1000 sq ft	1.60	394.38	2,915.68
General office building		11.01	1000 sq ft	770.00	8,477.70	68,690.57
Warehouse		4.96	1000 sq ft	200.00	992.00	7,333.86
General light industry		6.97	1000 sq ft	75.00	522.75	4,404.17
					29,953.29	241,923.20

12/23/2008 05:38:56 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	47.5	0.0	100.0	0.0
Light Truck < 3750 lbs	11.0	0.0	99.1	0.9
Light Truck 3751-5750 lbs	22.2	0.0	100.0	0.0
Med Truck 5751-8500 lbs	9.9	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.8	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	57.1	42.9
Med-Heavy Truck 14,001-33,000 lbs	1.1	0.0	18.2	81.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	34.3	65.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.1	0.0	90.9	9.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

12/23/2008 05:38:56 PM

% of Trips - Commercial (by land use)

Place of worship	3.0	1.5	95.5
City park	5.0	2.5	92.5
Quality resturant	8.0	4.0	88.0
High turnover (sit-down) rest.	5.0	2.5	92.5
Hotel	5.0	2.5	92.5
Strip mall	2.0	1.0	97.0
Bank (with drive-through)	2.0	1.0	97.0
General office building	35.0	17.5	47.5
Warehouse	2.0	1.0	97.0
General light industry	50.0	25.0	25.0

APPENDIX D NOISE ASSESSMENT DISCUSSION

This page intentionally left blank.

Background

This appendix presents background information on the metrics used to describe noise and results of the noise survey conducted at Fort Monroe in 1984 by USAEHA (1984). This overview includes an assessment of the:

- Acoustic quantity measured;
- Relevance of the acoustic quantity measured;
- Equipment used;
- Rationale for the choice of noise measurement sites;
- Findings; and
- Relationship of the findings to the unique acoustic environment at Fort Monroe.

Acoustic Quantity

The basic acoustic quantity in studies of environmental noise exposure is the equivalent sound level (LEQ, L_{eq}). Figure 1 is a visual conceptualization of LEQ. The definition provided by the U.S. Environmental Protection Agency (USEPA 1974) is:

> *The level of a constant sound which, in a given situation and time period, has the same sound energy as does a time-varying sound. Technically, equivalent sound level is the level of the time-weighted, mean square, A-weighted sound pressure. The time interval over which the measurement is taken should always be specified.*

Acoustical instruments designed to measure LEQ all sample the noise levels at some constant rate. As noted below, the instruments available to USAEHA in 1984 had a relatively slow sampling rate (4/sec) compared with today's with contemporary microprocessors. Nevertheless, this sampling rate is completely adequate for measuring the LEQ of traffic noise.

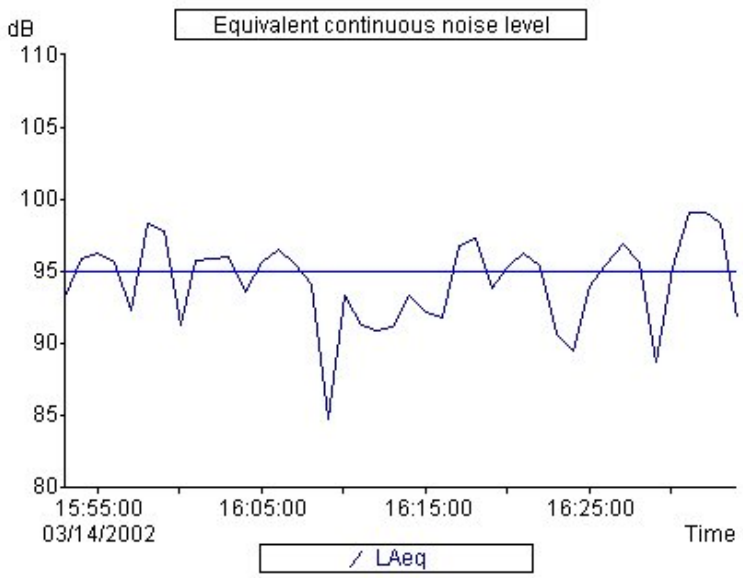


Figure 1. Visual Conceptualization of LEQ

Relevance of LEQ. There are two common approaches to the regulation of environmental noise: (1) limits on the maximum level of sound and (2) limits on LEQ. Limits on maximum level are typically found in municipal or county laws designed to deal with citizen noise complaints. Limits on LEQ are typically found in Federal and State regulations intended to deal with transportation noise, such as highways, airports and railroads, and the regulation of land use. For the noise of highway traffic, there are two ways of using LEQ. The first is the busy hour LEQ, which, typically, occurs during rush hour. Under Federal Highway Administration (FHWA) regulations, a busy hour LEQ of 67 dB (A-weighted) is the threshold at which the FHWA will consider funding remediation for traffic noise, such as traffic noise barriers.[1] The second way to use LEQ is the day-night average sound level (DNL). DNL is the average noise over a 24-hour period; the noise levels between 10:00 PM and 7:00 AM are adjusted upward by 10 dB to account for peoples' sensitivity to nighttime noise. Under Army regulations, a DNL of 65 dBA is the threshold of concern for noise in residential areas.

Equipment Used. In its 1984 study, the USAEHA collected data on the LEQ at Fort Monroe using the Metrosonics model dB301/652 noise monitoring system. The dB301 Metrologger was a pocket-sized unit which digitally-sampled the A-weighted noise level at a rate of four times per second, and stored the results in the form of sequential readings of $LEQ_{(10\ min)}$. By keeping a monitor in place and changing the battery every day,

[1] The complete set of noise assessment criteria used by the FHWA can be found in Table 5 of "Highway Traffic Noise Analysis and Abatement Policy and Guidance" as published by the Noise and Air Quality Branch, Office of Environment and Planning, Federal Highway Administration, Department of Transportation (June 1995). Retrieved on November 23, 2008, from http://www.asphaltrubber.org/ari/Noise/FHWA_Traffic_Noise_Analysis_and_Abatement_Policy_and_Guidance.pdf

USAEHA was able to achieve a nearly continuous record of around-the-clock noise levels. For the Fort Monroe study, the longest unbroken sequence of monitoring was 14 days at Site 5.

The availability of 10 minute LEQ data allowed USAEHA to display field measurements in a way which is somewhat more informative than the DNL. In their standard analyses for installations across the U.S., USAEHA technicians would bin data into the 144 sequential 10 minute periods for the 24-hour day, and the LEQ for each of these bins was calculated and displayed as the average. The sequential averages were then plotted alongside the highest LEQ and the lowest LEQ in the data set for each of the 144 sequential periods. By displaying the highest and lowest 10 minute LEQ during each period of the day, USAEHA was able to provide its customers with a visual indicator of the hour-to-hour and day-to-day variability in a particular soundscape. For example, large differences between the highest and lowest levels in an area can be an indicator of the potential for noise complaints, since people tend to complain when the levels from military operations exceed their ordinary expectations.[2] On the other hand, people who experience about the same amount of noise from one day to the next may be annoyed but are unlikely to complain.

Choice of Measurement Sites. USAEHA designed their study to capture both the highest traffic noise levels along the water's edge and the more typical levels at the interior of the installations. Sites 1 and 2 were located to register sound propagated over the water from I-64. Monitors at Sites 3, 4 and 5 were located to register the noise reduction from buildings. Site 4, which was located inside the walls of the Fort, was intended to capture the barrier effect of the enclosure. The map in Figure 2 shows the location of the USAEHA measurement site on Fort Monroe.

[2] George Luz, Richard Raspet, and Paul Schomer, "Analysis of community complaints to noise," Journal of the Acoustical Society of America, 73, 1229–1235 (1983).

Figure 2. Traffic noise measurement sites from the 1984 USAEHA study

Findings. The DNL during the period 26 November to 10 December 1984 was 67.7 dB at Site 1, 66.5 dB at Site 2, 65.2 dB at Site 3, 61.9 dB at Site 4, and 65.2 dB at Site 5. The 24 hour pattern of traffic noise is best illustrated in Figure 3, which is reproduced from Figure C.1 of the USAEHA report. [The 24 hour patterns at the other four sites are available in the USAEHA report.] An important feature in Figure 3 is the rather small difference between the minimum and maximum 10 minute LEQ data between 5:30 AM and 6:00 PM. During the day, traffic flow is relatively constant, and the sound level propagating toward Fort Monroe is also relatively constant. During the evening and night, the variability of sound propagation increases. This increased variability translates into a larger difference between the minimum and maximum 10 minute LEQ data during the evening and night than during the day.

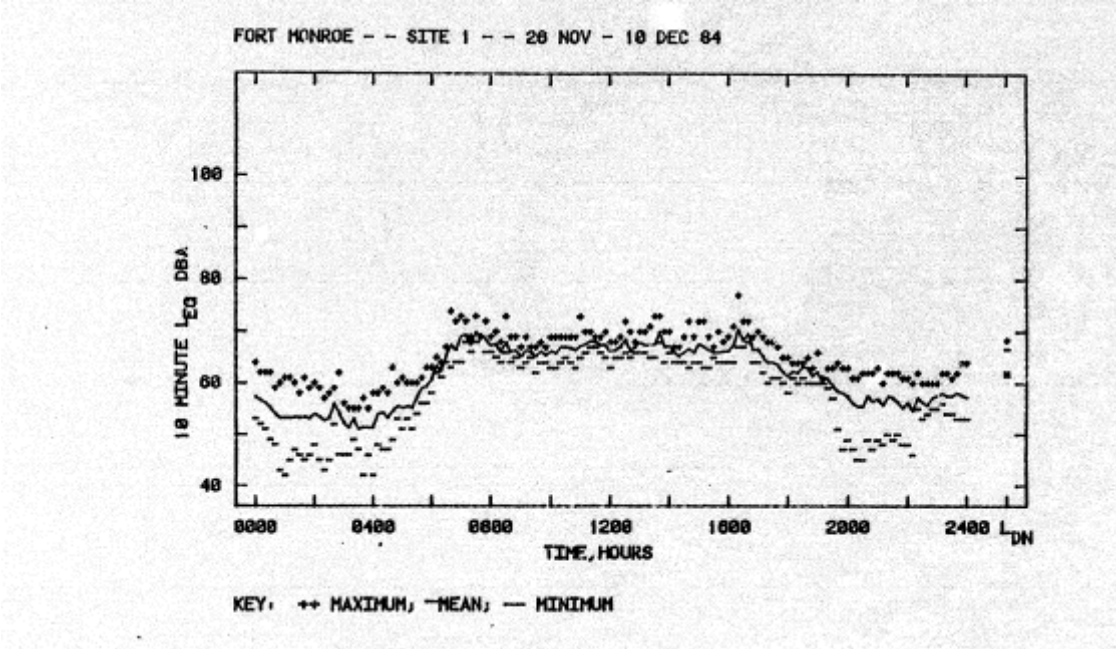


Figure 3. Variation in Noise Level on the Shore of Fort Monroe and Directly across the Water from I-64 (Note: the solid line is the average LEQ with the minimum shown by dashed lines and the maximum by crosses)

Fort Monroe Acoustic Environment. An aid to understanding why the traffic noise exposure at Fort Monroe is more variable at night than during the day is a set of standard diagrams used in acoustics in which sound is portrayed as traveling in "rays." To talk about "sound rays" can be a bit confusing, since most people are taught that sound moves in waves, such as the ripples one sees upon throwing a stone into a still pond. Nevertheless, describing sound as if it propagates in the same manner as light has an advantage, drawing attention to the fact that the wave front of sound can bend as it propagates through air. The technical term for this bending is "rarefaction," and the same term is used for sound traveling through a changing (nonhomogenous) atmosphere as used for light traveling through a lens. Figure 4 provides a ray diagram explanation of why sound is usually louder downwind than upwind. The left side of Figure 5 provides a ray diagram explanation of why someone standing on a mountain on a hot summer day can hear people down in the valley much more easily than the people in the valley can hear people on the mountain. On a hot summer day, air temperature generally decreases with altitude; sound travels slower in cool air than in warm air, and the rarefaction of sound results in the rays bending upward. [The converse situation is depicted in the right side of Figure 5.]

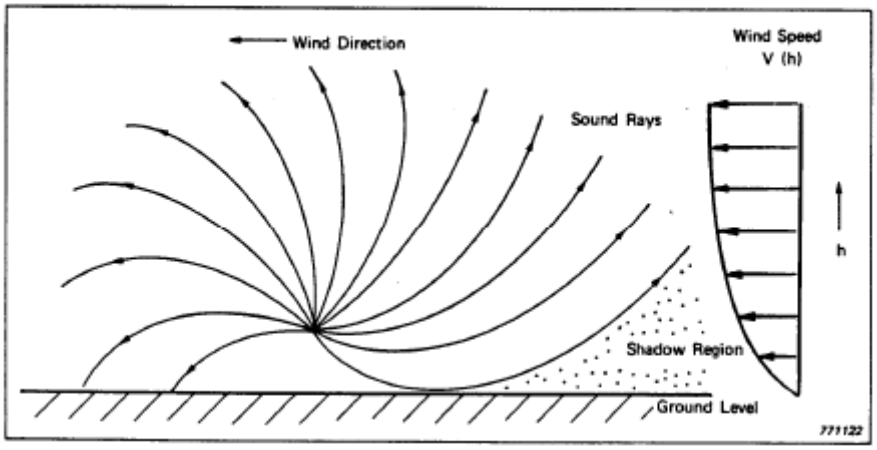


Figure 4. Sound Waves Subject to Rarefaction Toward the Ground at Locations Downwind of a Noise Source

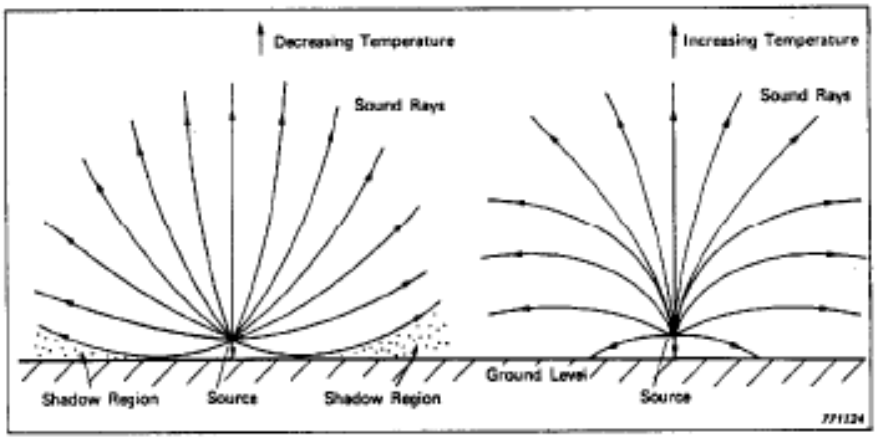


Figure 5. Effect of Air Temperature on Sound Waves

Propagation over water is even more complicated than portrayed in Figure 5, because the cooling of air next to the water can result in “sandwich” in which a layer of warm air is trapped between the water and upper layer of cooler air. This situation is depicted in Figure 6, and it is commonly described as propagation through a temperature inversion. Temperature inversions are more common at night than during the day, and they interact with wind direction. Depending on the relationship between temperature, wind direction, and wind speed, the sound level received at any one location can be higher or lower than usual. In any case, the sound level will be more variable.

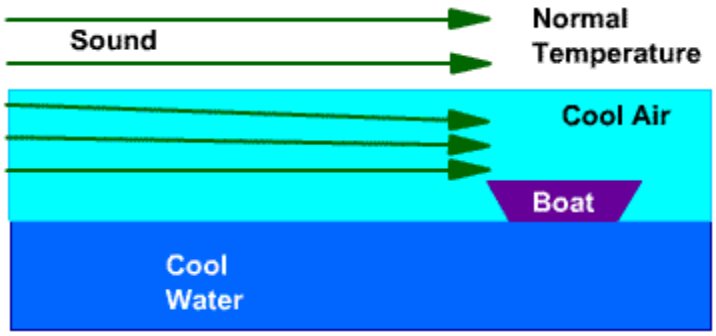


Figure 6. Effect of Cool Air On Sound Wave Bending

Propagation through a temperature inversion is not the only reason why sound levels are generally higher when propagation is over water than over land. The others are (1) absence of absorption of low frequency sound into the ground, (2) absence of dissipation of higher frequency sound by vegetation, and (3) absence of shielding of higher frequency sound by barriers. As an aid to understanding these variables, the acoustic spectra of automobile traffic traveling at different speeds over average pavement is presented in Figure 7.

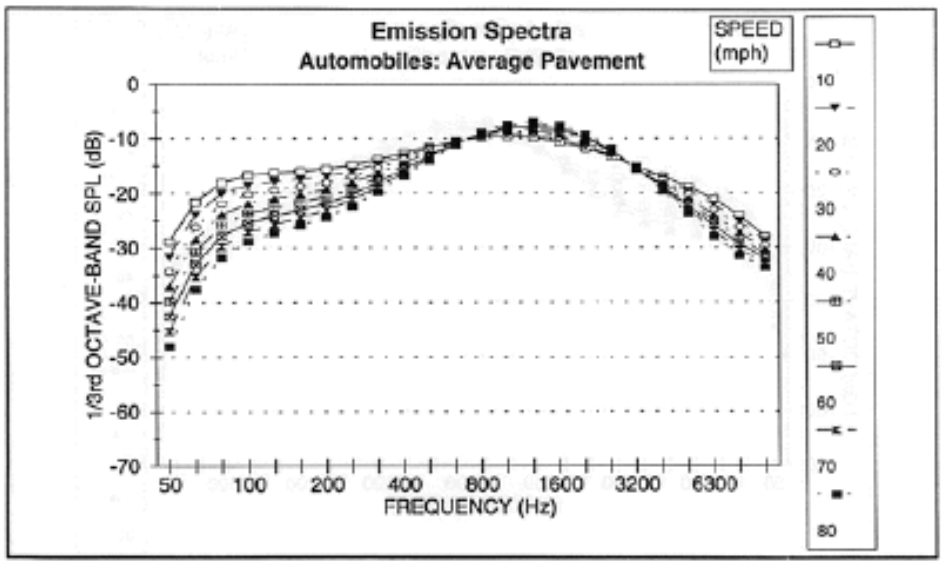


Figure 7. Acoustic Spectra of Automobiles Traveling Different Speeds on Average Pavement[3] (Note: the distance from the vehicles is 50 feet.)

The left side of Figure 7 depicts the relative level of the lowest frequency (longest wavelength) sound and the right side depicts the relative level of the highest (shortest

[3] Christopher Menge, Christopher Rossano, Grant Anderson, and Christopher Bajdek, FHWA Traffic Noise Model, Version 1. Technical Manual, Final Report: June 1993–February 1998, Report No. DOT-VNTSC-FHWA-98-2, U.S. Federal Highway Administration, Washington, DC.

wavelength) sound, which is of interest in assessments of traffic noise. When the sound of traffic is propagating over land, the three variables noted above combine to filter the spectrum of traffic sound so that, at a distance, it is perceived as a diffuse background sound. More of the filtering takes place at the high end of the spectrum than at the low end. At Fort Monroe, these variables do not begin to operate until the sound comes onto the property. Although there is some decrease in decibels across the span of the property, the overland distance for sound propagation is limited, and traffic noise remains a dominant feature of the acoustic environment.

APPENDIX E **AGENCY CONSULTATION LETTERS**

This page intentionally left blank.

DEPARTMENT OF THE ARMY
HEADQUARTERS FORT MONROE
102 MCNAIR DRIVE
FORT MONROE, VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

AUG 2 4 2006

Office of the Garrison Commander

The Honorable Gilbert Blue
Chairman
Catawba Indian Nation
996 Avenue of the Nations
Rock Hill, SC 29730

Dear Chairman Blue:

Fort Monroe invites the Catawba Indian Nation to participate in the National Historic Preservation Act (NHPA) Section 106 consultation process for the Base Realignment and Closure (BRAC) and reuse of Fort Monroe, a national historic landmark. Fort Monroe is scheduled to close as an active Army installation in the year 2011. We are contacting you because Fort Monroe is located in the area that might have been part of the territory once occupied by the Catawba. Geographic and historical information pertinent to the Catawba Indian Nation is located at the enclosure.

The purpose of the consultation in this BRAC is to develop a programmatic agreement to ensure that the Army meets its obligations under Sections 106 and 110 of the NHPA. This consultation will consider possible effects on historic properties and will be used to mitigate known and potential adverse effects that might result from reuse plans. For more information on Fort Monroe's historic properties, see our website at http://tradoc.monroe.army.mil/dpw/crm.asp. For information on the Local Redevelopment Authority, see their website at www.hampton.va.us.fort_monroe.

This process will not encompass development of reuse plans for Fort Monroe. Under BRAC, that function is the purview of the Commonwealth of Virginia, which has reversionary rights to much of the land by deed, and of the officially recognized Local Redevelopment Authority.

A Section 106 consultation meeting is scheduled for September 20, 2006, 1:30-4:30 PM at the Bay Breeze Community Center on Fort Monroe. You may wish to attend this meeting to

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

JAN 2 9 2007

Office of the Garrison Commander

The Honorable Gilbert Blue
Chairman
Catawba Indian Nation
996 Avenue of the Nations
Rock Hill, SC 29730

Dear Chairman Blue:

As part of Base Realignment and Closure (BRAC) actions for Fort Monroe, VA, participation in the National Historic Preservation Act, Section 106 consultation process is offered to the Catawba Indian Nation. To assist in your decision on participation, a disk is enclosed (Encl 1) with information about Native American sites at Fort Monroe. The sites are at Loci 8, 11, and 20 of archaeological site 44HT27. Loci 8 and 11 were discovered in the Phase I survey. No additional research has taken place at Locus 11, but Phase II excavations were conducted at Locus 8. Locus 20 was unexpectedly discovered as a deeply buried site during the renovation of a building, and Phase II testing was performed.

Enclosure 2 contains the minutes from the September 20, 2006, potential consulting parties meeting. A follow-up meeting is tentatively scheduled for March 2007. For details of the follow-meeting and to answer any questions you may have, please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero, at (757) 788-5363 or e-mail at Jennifer.lee.guerrero@us.army.mil. To facilitate discussions, please forward the name and method of contacting your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Mrs. Guerrero.

Sincerely,

for Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosures

learn more about Fort Monroe and the BRAC closure and reuse processes. Other attendees include the Virginia State Historic Preservation Officer, the Advisory Council on Historic Preservation, historical societies, veterans' organizations, Virginia's state-recognized tribes and other interested parties. The local point of contact for the section 106 process is Fort Monroe's environmental coordinator, Jennifer Guerrero. Please forward the name and contact information of your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Ms. Guerrero at (757) 788-5363 or e-mail jennifer.lee.guerrero@us.army.mil NLT September 5, 2006. Additionally, provide a list of individuals from your organization who will attend the meeting. Members of the BRAC National Environmental Policy Act Support Team are assisting Fort Monroe in Section 106 compliance.

We understand that there may be issues the Catawba Indian Nation does not wish to discuss in a public venue and will work with you to have separate conversations, if desired, at mutually agreeable venues. We look forward to working with you.

Sincerely

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

Fort Monroe Information Paper

Fort Monroe lies on a peninsula known as Old Point Comfort. Construction of Fort Monroe began in 1819. Land-building activities have approximately doubled the size of Old Point Comfort since the 1840's. Fort Monroe is the fourth fort on Old Point Comfort; the first was Fort Algernon (1609-1612), then the Fort at Old Point Comfort (1632-1667), and then Fort George (1728-1749). Due to the land-building activities, evidence of occupations of Old Point Comfort before Fort Monroe was constructed are expected to be located in the area roughly bounded by Patch Road to the west, Ingalls Road to the south, Fenwick Road on the east, and Griffiths Road on the north (see enclosures). Maps and birds-eye view drawings dating from the 1860's or earlier north of Griffiths Road depict a narrow, sand beach, roughly centered along Fenwick Road. This beach would have been subjected to periodic tidal surf and flooding and was probably unsuitable for long-term occupation.

All of the Fort Monroe National Historic Landmark is assigned archaeological site number 44HT27, with discreet loci of archaeological deposits within it. Most of the deposits are associated with the occupation of Fort Monroe; however, a few Native American loci dating to the Middle Woodland and Late Woodland periods are known, and the Kecoughtan village of the Powhatan Confederation lay approximately one mile southwest of Old Point Comfort at the time Fort Algernon was erected. Due to the land-building activities, the intact Native American loci are three feet or more below the current ground surface. The Army does not believe that any Native American Graves Protection and Repatriation Act Section 5 or 6 items have been found on those sites, but would be willing to electronically transmit the artifact lists to you for review.

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

MAR 2 0 2007

Office of the Garrison Commander

Dr. Wenonah G. Haire, Jr.
Tribal Historic Preservation Officer
Catawba Indian Nation
P.O. Box 750
Rock Hill, SC 29731

Dear Dr. Haire:

Fort Monroe will host a Section 106 consultation meeting pursuant to the National Historic Preservation Act requirements for the Base Realignment and Closure and reuse of Fort Monroe. This meeting is scheduled for April 10, 2007, 1:00-4:00 PM at the Bay Breeze Community Center located on Fort Monroe. A list of the other consulting parties is enclosed for your information.

At this meeting we will discuss the consultation process and come to an agreement on how best to proceed. We will also discuss the steps the Army has taken to date to identify historic properties, and how we can make relevant documents available to the public. If it is deemed appropriate by those in attendance, we may begin discussing a framework for developing a programmatic agreement.

Please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail Jennifer.lee.guerrero@us.army.mil regarding your availability to attend this meeting.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

List of Consulting Parties as of March 2007:

Absentee-Shawnee Tribe of Indians of Oklahoma
Advisory Council on Historic Preservation
APVA Preservation Virginia
Buckroe Civic Association
Citizens for a Fort Monroe National Park, Inc.
City of Hampton
Civil War Preservation Trust
Coast Defense Study Group
Commonwealth of Virginia
Diocese of Richmond
Federal Area Development Authority
Hampton University
National Historic Landmark Stewards Association
National Park Service
National Parks Conservation Association
National Trust for Historic Preservation
Norfolk Historical Society
Norfolk Preservation Alliance
Phoebus Civic Association
Phoebus Improvement League
Shawnee Tribe
The American Legion Post 48
The Archeological Society of Virginia
The Casemate Museum Foundation, Inc.
The Contraband Historical Society
The Old Point National Bank
United Daughters of the Confederacy
Virginia Council on Indians
Virginia Department of Environmental Quality, Office of Remediation Federal Facilities Program
Virginia Department of Historic Resources

DEPARTMENT OF THE ARMY
HEADQUARTERS FORT MONROE
102 MCNAIR DRIVE
FORT MONROE, VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

AUG 2 4 2006

Office of the Garrison Commander

The Honorable Chadwick Smith
Principal Chief
Cherokee Nation
P.O. Box 948
Tahlequah, OK 74465

Dear Chief Smith:

Fort Monroe invites the Cherokee Nation to participate in the National Historic Preservation Act (NHPA) Section 106 consultation process for the Base Realignment and Closure (BRAC) and reuse of Fort Monroe, a national historic landmark. Fort Monroe is scheduled to close as an active Army installation in the year 2011. We are contacting you because Fort Monroe is located in the area that might have been part of the territory once occupied by the Cherokee. Geographic and historical information pertinent to the Cherokee Nation is located at the enclosure.

The purpose of the consultation in this BRAC is to develop a programmatic agreement to ensure that the Army meets its obligations under Sections 106 and 110 of the NHPA. This consultation will consider possible effects on historic properties and will be used to mitigate known and potential adverse effects that might result from reuse plans. For more information on Fort Monroe's historic properties, see our website at http://tradoc.monroe.army.mil/dpw/crm.asp. For information on the Local Redevelopment Authority, see their website at www.hampton.va.us.fort_monroe.

This process will not encompass development of reuse plans for Fort Monroe. Under BRAC, that function is the purview of the Commonwealth of Virginia, which has reversionary rights to much of the land by deed, and of the officially recognized Local Redevelopment Authority.

A Section 106 consultation meeting is scheduled for September 20, 2006, 1:30-4:30 PM at the Bay Breeze Community Center on Fort Monroe. You may wish to attend this meeting to

learn more about Fort Monroe and the BRAC closure and reuse processes. Other attendees include the Virginia State Historic Preservation Officer, the Advisory Council on Historic Preservation, historical societies, veterans' organizations, Virginia's state-recognized tribes and other interested parties. The local point of contact for the section 106 process is Fort Monroe's environmental coordinator, Jennifer Guerrero. Please forward the name and contact information of your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Ms. Guerrero at (757) 788-5363 or e-mail jennifer.lee.guerrero@us.army.mil NLT September 5, 2006. Additionally, provide a list of individuals from your organization who will attend the meeting. Members of the BRAC National Environmental Policy Act Support Team are assisting Fort Monroe in Section 106 compliance.

We understand that there may be issues the Cherokee Nation does not wish to discuss in a public venue and will work with you to have separate conversations, if desired, at mutually agreeable venues. We look forward to working with you.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

Fort Monroe Information Paper

Fort Monroe lies on a peninsula known as Old Point Comfort. Construction of Fort Monroe began in 1819. Land-building activities have approximately doubled the size of Old Point Comfort since the 1840's. Fort Monroe is the fourth fort on Old Point Comfort; the first was Fort Algernon (1609-1612), then the Fort at Old Point Comfort (1632-1667), and then Fort George (1728-1749). Due to the land-building activities, evidence of occupations of Old Point Comfort before Fort Monroe was constructed are expected to be located in the area roughly bounded by Patch Road to the west, Ingalls Road to the south, Fenwick Road on the east, and Griffiths Road on the north (see enclosures). Maps and birds-eye view drawings dating from the 1860's or earlier north of Griffiths Road depict a narrow, sand beach, roughly centered along Fenwick Road. This beach would have been subjected to periodic tidal surf and flooding and was probably unsuitable for long-term occupation.

All of the Fort Monroe National Historic Landmark is assigned archaeological site number 44HT27, with discreet loci of archaeological deposits within it. Most of the deposits are associated with the occupation of Fort Monroe; however, a few Native American loci dating to the Middle Woodland and Late Woodland periods are known, and the Kecoughtan village of the Powhatan Confederation lay approximately one mile southwest of Old Point Comfort at the time Fort Algernon was erected. Due to the land-building activities, the intact Native American loci are three feet or more below the current ground surface. The Army does not believe that any Native American Graves Protection and Repatriation Act Section 5 or 6 items have been found on those sites, but would be willing to electronically transmit the artifact lists to you for review.

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

JAN 2 9 2007

Office of the Garrison Commander

The Honorable Chadwick Smith
Principal Chief
Cherokee Nation
P.O. Box 948
Tahlequah, OK 74465

Dear Chief Smith:

As part of Base Realignment and Closure (BRAC) actions for Fort Monroe, VA, participation in the National Historic Preservation Act, Section 106 consultation process is offered to the Cherokee Nation. To assist in your decision on participation, a disk is enclosed (Encl 1) with information about Native American sites at Fort Monroe. The sites are at Loci 8, 11, and 20 of archaeological site 44HT27. Loci 8 and 11 were discovered in the Phase I survey. No additional research has taken place at Locus 11, but Phase II excavations were conducted at Locus 8. Locus 20 was unexpectedly discovered as a deeply buried site during the renovation of a building, and Phase II testing was performed.

Enclosure 2 contains the minutes from the September 20, 2006, potential consulting parties meeting. A follow-up meeting is tentatively scheduled for March 2007. For details of the follow-meeting and to answer any questions you may have, please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero, at (757) 788-5363 or e-mail at Jennifer.lee.guerrero@us.army.mil. To facilitate discussions, please forward the name and method of contacting your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Mrs. Guerrero.

Sincerely,

for Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosures

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

MAR 2 0 2007

Office of the Garrison Commander

Dr. Richard Allen
Historic Preservation Program
Cherokee Nation
P.O. Box 948
Tahlequah, OK 74465

Dear Dr. Allen:

Fort Monroe will host a Section 106 consultation meeting pursuant to the National Historic Preservation Act requirements for the Base Realignment and Closure and reuse of Fort Monroe. This meeting is scheduled for April 10, 2007, 1:00-4:00 PM at the Bay Breeze Community Center located on Fort Monroe. A list of the other consulting parties is enclosed for your information.

At this meeting we will discuss the consultation process and come to an agreement on how best to proceed. We will also discuss the steps the Army has taken to date to identify historic properties, and how we can make relevant documents available to the public. If it is deemed appropriate by those in attendance, we may begin discussing a framework for developing a programmatic agreement.

Please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail Jennifer.lee.guerrero@us.army.mil regarding your availability to attend this meeting.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

List of Consulting Parties as of March 2007:

Absentee-Shawnee Tribe of Indians of Oklahoma
Advisory Council on Historic Preservation
APVA Preservation Virginia
Buckroe Civic Association
Citizens for a Fort Monroe National Park, Inc.
City of Hampton
Civil War Preservation Trust
Coast Defense Study Group
Commonwealth of Virginia
Diocese of Richmond
Federal Area Development Authority
Hampton University
National Historic Landmark Stewards Association
National Park Service
National Parks Conservation Association
National Trust for Historic Preservation
Norfolk Historical Society
Norfolk Preservation Alliance
Phoebus Civic Association
Phoebus Improvement League
Shawnee Tribe
The American Legion Post 48
The Archeological Society of Virginia
The Casemate Museum Foundation, Inc.
The Contraband Historical Society
The Old Point National Bank
United Daughters of the Confederacy
Virginia Council on Indians
Virginia Department of Environmental Quality, Office of Remediation Federal Facilities Program
Virginia Department of Historic Resources

DEPARTMENT OF THE ARMY
HEADQUARTERS FORT MONROE
102 MCNAIR DRIVE
FORT MONROE, VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

AUG 2 4 2006

Office of the Garrison Commander

The Honorable Michell Hicks
Principal Chief
Eastern Band of Cherokee Indians
P.O. Box 455
Cherokee, NC 28719

Dear Chief Hicks:

Fort Monroe invites the Eastern Band of Cherokee to participate in the National Historic Preservation Act (NHPA) Section 106 consultation process for the Base Realignment and Closure (BRAC) and reuse of Fort Monroe, a national historic landmark. Fort Monroe is scheduled to close as an active Army installation in the year 2011. We are contacting you because Fort Monroe is located in the area that might have been part of the territory once occupied by the Cherokee. Geographic and historical information pertinent to the Eastern Band of Cherokee Indians is located at the enclosure.

The purpose of the consultation in this BRAC is to develop a programmatic agreement to ensure that the Army meets its obligations under Sections 106 and 110 of the NHPA. This consultation will consider possible effects on historic properties and will be used to mitigate known and potential adverse effects that might result from reuse plans. For more information on Fort Monroe's historic properties, see our website at http://tradoc.monroe.army.mil/dpw/crm.asp. For information on the Local Redevelopment Authority, see their website at www.hampton.va.us.fort_monroe.

This process will not encompass development of reuse plans for Fort Monroe. Under BRAC, that function is the purview of the Commonwealth of Virginia, which has reversionary rights to much of the land by deed, and of the officially recognized Local Redevelopment Authority.

A Section 106 consultation meeting is scheduled for September 20, 2006, 1:30-4:30 PM at the Bay Breeze Community Center on Fort Monroe. You may wish to attend this meeting to

learn more about Fort Monroe and the BRAC closure and reuse processes. Other attendees include the Virginia State Historic Preservation Officer, the Advisory Council on Historic Preservation, historical societies, veterans' organizations, Virginia's state-recognized tribes and other interested parties. The local point of contact for the section 106 process is Fort Monroe's environmental coordinator, Jennifer Guerrero. Please forward the name and contact information of your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Ms. Guerrero at (757) 788-5363 or e-mail jennifer.lee.guerrero@us.army.mil NLT September 5, 2006. Additionally, provide a list of individuals from your organization who will attend the meeting. Members of the BRAC National Environmental Policy Act Support Team are assisting Fort Monroe in Section 106 compliance.

We understand that there may be issues the Eastern Band of Cherokee does not wish to discuss in a public venue and will work with you to have separate conversations, if desired, at mutually agreeable venues. We look forward to working with you.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

Fort Monroe Information Paper

Fort Monroe lies on a peninsula known as Old Point Comfort. Construction of Fort Monroe began in 1819. Land-building activities have approximately doubled the size of Old Point Comfort since the 1840's. Fort Monroe is the fourth fort on Old Point Comfort; the first was Fort Algernon (1609-1612), then the Fort at Old Point Comfort (1632-1667), and then Fort George (1728-1749). Due to the land-building activities, evidence of occupations of Old Point Comfort before Fort Monroe was constructed are expected to be located in the area roughly bounded by Patch Road to the west, Ingalls Road to the south, Fenwick Road on the east, and Griffiths Road on the north (see enclosures). Maps and birds-eye view drawings dating from the 1860's or earlier north of Griffiths Road depict a narrow, sand beach, roughly centered along Fenwick Road. This beach would have been subjected to periodic tidal surf and flooding and was probably unsuitable for long-term occupation.

All of the Fort Monroe National Historic Landmark is assigned archaeological site number 44HT27, with discreet loci of archaeological deposits within it. Most of the deposits are associated with the occupation of Fort Monroe; however, a few Native American loci dating to the Middle Woodland and Late Woodland periods are known, and the Kecoughtan village of the Powhatan Confederation lay approximately one mile southwest of Old Point Comfort at the time Fort Algernon was erected. Due to the land-building activities, the intact Native American loci are three feet or more below the current ground surface. The Army does not believe that any Native American Graves Protection and Repatriation Act Section 5 or 6 items have been found on those sites, but would be willing to electronically transmit the artifact lists to you for review.

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

JAN 29 2007

Office of the Garrison Commander

The Honorable Michell Hicks
Principal Chief
Eastern Band of Cherokee Indians
P.O. Box 455
Cherokee, NC 28719

Dear Chief Hicks:

As part of Base Realignment and Closure (BRAC) actions for Fort Monroe, VA, participation in the National Historic Preservation Act, Section 106 consultation process is offered to the Eastern Band of Cherokee Indians. To assist in your decision on participation, a disk is enclosed (Encl 1) with information about Native American sites at Fort Monroe. The sites are at Loci 8, 11, and 20 of archaeological site 44HT27. Loci 8 and 11 were discovered in the Phase I survey. No additional research has taken place at Locus 11, but Phase II excavations were conducted at Locus 8. Locus 20 was unexpectedly discovered as a deeply buried site during the renovation of a building, and Phase II testing was performed.

Enclosure 2 contains the minutes from the September 20, 2006, potential consulting parties meeting. A follow-up meeting is tentatively scheduled for March 2007. For details of the follow-meeting and to answer any questions you may have, please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero, at (757) 788-5363 or e-mail at Jennifer.lee.guerrero@us.army.mil. To facilitate discussions, please forward the name and method of contacting your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Mrs. Guerrero.

Sincerely,

for Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosures

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

MAR 2 0 2007

Office of the Garrison Commander

Ms. Lisa Stopp
Acting Tribal Historic Preservation Officer
United Keetoowah Band of Cherokee Indians
P.O. Box 746
Tahlequah, OK 74465

Dear Ms. Stopp:

Fort Monroe will host a Section 106 consultation meeting pursuant to the National Historic Preservation Act requirements for the Base Realignment and Closure and reuse of Fort Monroe. This meeting is scheduled for April 10, 2007, 1:00-4:00 PM at the Bay Breeze Community Center located on Fort Monroe. A list of the other consulting parties is enclosed for your information.

At this meeting we will discuss the consultation process and come to an agreement on how best to proceed. We will also discuss the steps the Army has taken to date to identify historic properties, and how we can make relevant documents available to the public. If it is deemed appropriate by those in attendance, we may begin discussing a framework for developing a programmatic agreement.

Please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail Jennifer.lee.guerrero@us.army.mil regarding your availability to attend this meeting.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

List of Consulting Parties as of March 2007:

Absentee-Shawnee Tribe of Indians of Oklahoma
Advisory Council on Historic Preservation
APVA Preservation Virginia
Buckroe Civic Association
Citizens for a Fort Monroe National Park, Inc.
City of Hampton
Civil War Preservation Trust
Coast Defense Study Group
Commonwealth of Virginia
Diocese of Richmond
Federal Area Development Authority
Hampton University
National Historic Landmark Stewards Association
National Park Service
National Parks Conservation Association
National Trust for Historic Preservation
Norfolk Historical Society
Norfolk Preservation Alliance
Phoebus Civic Association
Phoebus Improvement League
Shawnee Tribe
The American Legion Post 48
The Archeological Society of Virginia
The Casemate Museum Foundation, Inc.
The Contraband Historical Society
The Old Point National Bank
United Daughters of the Confederacy
Virginia Council on Indians
Virginia Department of Environmental Quality, Office of Remediation Federal Facilities Program
Virginia Department of Historic Resources

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

JAN 2 9 2007

Office of the Garrison Commander

The Honorable George Wickliffe
Chief
United Keetoowah Band of Cherokee Indians
P.O. Box 746
Tahlequah, OK 74465

Dear Chief Wickliffe:

As part of Base Realignment and Closure (BRAC) actions for Fort Monroe, VA, participation in the National Historic Preservation Act, Section 106 consultation process is offered to the United Keetoowah Band of Cherokee Indians. To assist in your decision on participation, a disk is enclosed (Encl 1) with information about Native American sites at Fort Monroe. The sites are at Loci 8, 11, and 20 of archaeological site 44HT27. Loci 8 and 11 were discovered in the Phase I survey. No additional research has taken place at Locus 11, but Phase II excavations were conducted at Locus 8. Locus 20 was unexpectedly discovered as a deeply buried site during the renovation of a building, and Phase II testing was performed.

Enclosure 2 contains the minutes from the September 20, 2006, potential consulting parties meeting. A follow-up meeting is tentatively scheduled for March 2007. For details of the follow-meeting and to answer any questions you may have, please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero, at (757) 788-5363 or e-mail at Jennifer.lee.guerrero@us.army.mil. To facilitate discussions, please forward the name and method of contacting your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Mrs. Guerrero.

Sincerely,

for Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosures

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

MAR 2 0 2007

Office of the Garrison Commander

Ms. Lisa Stopp
Acting Tribal Historic Preservation Officer
United Keetoowah Band of Cherokee Indians
P.O. Box 746
Tahlequah, OK 74465

Dear Ms. Stopp:

Fort Monroe will host a Section 106 consultation meeting pursuant to the National Historic Preservation Act requirements for the Base Realignment and Closure and reuse of Fort Monroe. This meeting is scheduled for April 10, 2007, 1:00-4:00 PM at the Bay Breeze Community Center located on Fort Monroe. A list of the other consulting parties is enclosed for your information.

At this meeting we will discuss the consultation process and come to an agreement on how best to proceed. We will also discuss the steps the Army has taken to date to identify historic properties, and how we can make relevant documents available to the public. If it is deemed appropriate by those in attendance, we may begin discussing a framework for developing a programmatic agreement.

Please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail Jennifer.lee.guerrero@us.army.mil regarding your availability to attend this meeting.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

List of Consulting Parties as of March 2007:

Absentee-Shawnee Tribe of Indians of Oklahoma
Advisory Council on Historic Preservation
APVA Preservation Virginia
Buckroe Civic Association
Citizens for a Fort Monroe National Park, Inc.
City of Hampton
Civil War Preservation Trust
Coast Defense Study Group
Commonwealth of Virginia
Diocese of Richmond
Federal Area Development Authority
Hampton University
National Historic Landmark Stewards Association
National Park Service
National Parks Conservation Association
National Trust for Historic Preservation
Norfolk Historical Society
Norfolk Preservation Alliance
Phoebus Civic Association
Phoebus Improvement League
Shawnee Tribe
The American Legion Post 48
The Archeological Society of Virginia
The Casemate Museum Foundation, Inc.
The Contraband Historical Society
The Old Point National Bank
United Daughters of the Confederacy
Virginia Council on Indians
Virginia Department of Environmental Quality, Office of Remediation Federal Facilities Program
Virginia Department of Historic Resources

DEPARTMENT OF THE ARMY
HEADQUARTERS FORT MONROE
102 MCNAIR DRIVE
FORT MONROE, VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

AUG 2 4 2006

Office of the Garrison Commander

The Honorable Ron Sparkman
Chairman
Shawnee Tribe
P.O. Box 189
Miami, OK 74355

Dear Chief Sparkman:

Fort Monroe invites the Shawnee Tribe to participate in the National Historic Preservation Act (NHPA) Section 106 consultation process for the Base Realignment and Closure (BRAC) and reuse of Fort Monroe, a national historic landmark. Fort Monroe is scheduled to close as an active Army installation in the year 2011. We are contacting you because Fort Monroe is located in the area that might have been part of the territory once occupied by the Shawnee. Geographic and historical information pertinent to the Shawnee Tribe is located at the enclosure.

The purpose of the consultation in this BRAC is to develop a programmatic agreement to ensure that the Army meets its obligations under Sections 106 and 110 of the NHPA. This consultation will consider possible effects on historic properties and will be used to mitigate known and potential adverse effects that might result from reuse plans. For more information on Fort Monroe's historic properties, see our website at http://tradoc.monroe.army.mil/dpw/crm.asp. For information on the Local Redevelopment Authority, see their website at www.hampton.va.us.fort_monroe.

This process will not encompass development of reuse plans for Fort Monroe. Under BRAC, that function is the purview of the Commonwealth of Virginia, which has reversionary rights to much of the land by deed, and of the officially recognized Local Redevelopment Authority.

A Section 106 consultation meeting is scheduled for September 20, 2006, 1:30-4:30 PM at the Bay Breeze Community Center on Fort Monroe. You may wish to attend this meeting to

learn more about Fort Monroe and the BRAC closure and reuse processes. Other attendees include the Virginia State Historic Preservation Officer, the Advisory Council on Historic Preservation, historical societies, veterans' organizations, Virginia's state-recognized tribes and other interested parties. The local point of contact for the section 106 process is Fort Monroe's environmental coordinator, Jennifer Guerrero. Please forward the name and contact information of your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Ms. Guerrero at (757) 788-5363 or e-mail jennifer.lee.guerrero@us.army.mil NLT September 5, 2006. Additionally, provide a list of individuals from your organization who will attend the meeting. Members of the BRAC National Environmental Policy Act Support Team are assisting Fort Monroe in Section 106 compliance.

We understand that there may be issues the Shawnee Tribe does not wish to discuss in a public venue and will work with you to have separate conversations, if desired, at mutually agreeable venues. We look forward to working with you.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

Fort Monroe Information Paper

Fort Monroe lies on a peninsula known as Old Point Comfort. Construction of Fort Monroe began in 1819. Land-building activities have approximately doubled the size of Old Point Comfort since the 1840's. Fort Monroe is the fourth fort on Old Point Comfort; the first was Fort Algernon (1609-1612), then the Fort at Old Point Comfort (1632-1667), and then Fort George (1728-1749). Due to the land-building activities, evidence of occupations of Old Point Comfort before Fort Monroe was constructed are expected to be located in the area roughly bounded by Patch Road to the west, Ingalls Road to the south, Fenwick Road on the east, and Griffiths Road on the north (see enclosures). Maps and birds-eye view drawings dating from the 1860's or earlier north of Griffiths Road depict a narrow, sand beach, roughly centered along Fenwick Road. This beach would have been subjected to periodic tidal surf and flooding and was probably unsuitable for long-term occupation.

All of the Fort Monroe National Historic Landmark is assigned archaeological site number 44HT27, with discreet loci of archaeological deposits within it. Most of the deposits are associated with the occupation of Fort Monroe; however, a few Native American loci dating to the Middle Woodland and Late Woodland periods are known, and the Kecoughtan village of the Powhatan Confederation lay approximately one mile southwest of Old Point Comfort at the time Fort Algernon was erected. Due to the land-building activities, the intact Native American loci are three feet or more below the current ground surface. The Army does not believe that any Native American Graves Protection and Repatriation Act Section 5 or 6 items have been found on those sites, but would be willing to electronically transmit the artifact lists to you for review.

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

JAN 29 2007

Office of the Garrison Commander

Rebecca Hawkins
Tribal Historic Preservation Officer
Shawnee Tribe
P.O. Box 189
Miami, OK 74355

Dear Ms. Hawkins:

Enclosed please find the minutes from the September 20, 2006, National Historic Preservation Act, Section 106, meeting on the closure and reuse of Fort Monroe. A follow-up meeting is expected to be held in March 2007, but the details have not been finalized yet.

To provide you with more information about the Native American sites at Fort Monroe, enclosed please find a disc containing information on Loci 8, 11, and 20 of archaeological site 44HT27. Loci 8 and 11 were discovered in the Phase I survey. No additional research has taken place at Locus 11, but Phase II excavations were conducted at Locus 8. Locus 20 was unexpectedly discovered as a deeply buried site during the renovation of a building, and Phase II testing was performed.

If you have any questions, please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail at Jennifer.lee.guerrero@us.army.mil.

Sincerely,

for Melissa A. Magnuson
Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosures

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

MAR 2 0 2007

Office of the Garrison Commander

Ms. Lisa Stopp
Acting Tribal Historic Preservation Officer
United Keetoowah Band of Cherokee Indians
P.O. Box 746
Tahlequah, OK 74465

Dear Ms. Stopp:

Fort Monroe will host a Section 106 consultation meeting pursuant to the National Historic Preservation Act requirements for the Base Realignment and Closure and reuse of Fort Monroe. This meeting is scheduled for April 10, 2007, 1:00-4:00 PM at the Bay Breeze Community Center located on Fort Monroe. A list of the other consulting parties is enclosed for your information.

At this meeting we will discuss the consultation process and come to an agreement on how best to proceed. We will also discuss the steps the Army has taken to date to identify historic properties, and how we can make relevant documents available to the public. If it is deemed appropriate by those in attendance, we may begin discussing a framework for developing a programmatic agreement.

Please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail Jennifer.lee.guerrero@us.army.mil regarding your availability to attend this meeting.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

List of Consulting Parties as of March 2007:

Absentee-Shawnee Tribe of Indians of Oklahoma
Advisory Council on Historic Preservation
APVA Preservation Virginia
Buckroe Civic Association
Citizens for a Fort Monroe National Park, Inc.
City of Hampton
Civil War Preservation Trust
Coast Defense Study Group
Commonwealth of Virginia
Diocese of Richmond
Federal Area Development Authority
Hampton University
National Historic Landmark Stewards Association
National Park Service
National Parks Conservation Association
National Trust for Historic Preservation
Norfolk Historical Society
Norfolk Preservation Alliance
Phoebus Civic Association
Phoebus Improvement League
Shawnee Tribe
The American Legion Post 48
The Archeological Society of Virginia
The Casemate Museum Foundation, Inc.
The Contraband Historical Society
The Old Point National Bank
United Daughters of the Confederacy
Virginia Council on Indians
Virginia Department of Environmental Quality, Office of Remediation Federal Facilities Program
Virginia Department of Historic Resources

DEPARTMENT OF THE ARMY
HEADQUARTERS FORT MONROE
102 MCNAIR DRIVE
FORT MONROE, VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

AUG 2 4 2006

Office of the Garrison Commander

The Honorable Ron Sparkman
Chairman
Shawnee Tribe
P.O. Box 189
Miami, OK 74355

Dear Chief Sparkman:

Fort Monroe invites the Shawnee Tribe to participate in the National Historic Preservation Act (NHPA) Section 106 consultation process for the Base Realignment and Closure (BRAC) and reuse of Fort Monroe, a national historic landmark. Fort Monroe is scheduled to close as an active Army installation in the year 2011. We are contacting you because Fort Monroe is located in the area that might have been part of the territory once occupied by the Shawnee. Geographic and historical information pertinent to the Shawnee Tribe is located at the enclosure.

The purpose of the consultation in this BRAC is to develop a programmatic agreement to ensure that the Army meets its obligations under Sections 106 and 110 of the NHPA. This consultation will consider possible effects on historic properties and will be used to mitigate known and potential adverse effects that might result from reuse plans. For more information on Fort Monroe's historic properties, see our website at http://tradoc.monroe.army.mil/dpw/crm.asp. For information on the Local Redevelopment Authority, see their website at www.hampton.va.us.fort_monroe.

This process will not encompass development of reuse plans for Fort Monroe. Under BRAC, that function is the purview of the Commonwealth of Virginia, which has reversionary rights to much of the land by deed, and of the officially recognized Local Redevelopment Authority.

A Section 106 consultation meeting is scheduled for September 20, 2006, 1:30-4:30 PM at the Bay Breeze Community Center on Fort Monroe. You may wish to attend this meeting to

learn more about Fort Monroe and the BRAC closure and reuse processes. Other attendees include the Virginia State Historic Preservation Officer, the Advisory Council on Historic Preservation, historical societies, veterans' organizations, Virginia's state-recognized tribes and other interested parties. The local point of contact for the section 106 process is Fort Monroe's environmental coordinator, Jennifer Guerrero. Please forward the name and contact information of your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Ms. Guerrero at (757) 788-5363 or e-mail jennifer.lee.guerrero@us.army.mil NLT September 5, 2006. Additionally, provide a list of individuals from your organization who will attend the meeting. Members of the BRAC National Environmental Policy Act Support Team are assisting Fort Monroe in Section 106 compliance.

We understand that there may be issues the Shawnee Tribe does not wish to discuss in a public venue and will work with you to have separate conversations, if desired, at mutually agreeable venues. We look forward to working with you.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

Fort Monroe Information Paper

Fort Monroe lies on a peninsula known as Old Point Comfort. Construction of Fort Monroe began in 1819. Land-building activities have approximately doubled the size of Old Point Comfort since the 1840's. Fort Monroe is the fourth fort on Old Point Comfort; the first was Fort Algernon (1609-1612), then the Fort at Old Point Comfort (1632-1667), and then Fort George (1728-1749). Due to the land-building activities, evidence of occupations of Old Point Comfort before Fort Monroe was constructed are expected to be located in the area roughly bounded by Patch Road to the west, Ingalls Road to the south, Fenwick Road on the east, and Griffiths Road on the north (see enclosures). Maps and birds-eye view drawings dating from the 1860's or earlier north of Griffiths Road depict a narrow, sand beach, roughly centered along Fenwick Road. This beach would have been subjected to periodic tidal surf and flooding and was probably unsuitable for long-term occupation.

All of the Fort Monroe National Historic Landmark is assigned archaeological site number 44HT27, with discreet loci of archaeological deposits within it. Most of the deposits are associated with the occupation of Fort Monroe; however, a few Native American loci dating to the Middle Woodland and Late Woodland periods are known, and the Kecoughtan village of the Powhatan Confederation lay approximately one mile southwest of Old Point Comfort at the time Fort Algernon was erected. Due to the land-building activities, the intact Native American loci are three feet or more below the current ground surface. The Army does not believe that any Native American Graves Protection and Repatriation Act Section 5 or 6 items have been found on those sites, but would be willing to electronically transmit the artifact lists to you for review.

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

JAN 29 2007

Office of the Garrison Commander

Rebecca Hawkins
Tribal Historic Preservation Officer
Shawnee Tribe
P.O. Box 189
Miami, OK 74355

Dear Ms. Hawkins:

Enclosed please find the minutes from the September 20, 2006, National Historic Preservation Act, Section 106, meeting on the closure and reuse of Fort Monroe. A follow-up meeting is expected to be held in March 2007, but the details have not been finalized yet.

To provide you with more information about the Native American sites at Fort Monroe, enclosed please find a disc containing information on Loci 8, 11, and 20 of archaeological site 44HT27. Loci 8 and 11 were discovered in the Phase I survey. No additional research has taken place at Locus 11, but Phase II excavations were conducted at Locus 8. Locus 20 was unexpectedly discovered as a deeply buried site during the renovation of a building, and Phase II testing was performed.

If you have any questions, please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail at Jennifer.lee.guerrero@us.army.mil.

Sincerely,

for Melissa A. Magnuson
Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosures

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

MAR 2 0 2007

Office of the Garrison Commander

Ms. Rebecca Hawkins
Tribal Historic Preservation Officer
Shawnee Tribe
P.O. Box 189
Miami, OK 74355

Dear Ms. Hawkins:

Fort Monroe will host a Section 106 consultation meeting pursuant to the National Historic Preservation Act requirements for the Base Realignment and Closure and reuse of Fort Monroe. This meeting is scheduled for April 10, 2007, 1:00-4:00 PM at the Bay Breeze Community Center located on Fort Monroe. We received your request to be included as a consulting party and invite you to join us. A list of the other consulting parties is enclosed for your information.

At this meeting we will discuss the consultation process and come to an agreement on how best to proceed. We will also discuss the steps the Army has taken to date to identify historic properties, and how we can make relevant documents available to the public. If it is deemed appropriate by those in attendance, we may begin discussing a framework for developing a programmatic agreement.

Please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail Jennifer.lee.guerrero@us.army.mil regarding your availability to attend this meeting.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS FORT MONROE
102 MCNAIR DRIVE
FORT MONROE, VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

AUG 2 4 2006

Office of the Garrison Commander

The Honorable Larry Nuckolls
Governor
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee, OK 74801

Dear Governor Nuckolls:

Fort Monroe invites the Absentee-Shawnee Tribe of Indians of Oklahoma to participate in the National Historic Preservation Act (NHPA) Section 106 consultation process for the Base Realignment and Closure (BRAC) and reuse of Fort Monroe, a national historic landmark. Fort Monroe is scheduled to close as an active Army installation in the year 2011. We are contacting you because Fort Monroe is located in the area that might have been part of the territory once occupied by the Shawnee. Geographic and historical information pertinent to the Absentee-Shawnee Tribe of Indians of Oklahoma is located at the enclosure.

The purpose of the consultation in this BRAC is to develop a programmatic agreement to ensure that the Army meets its obligations under Sections 106 and 110 of the NHPA. This consultation will consider possible effects on historic properties and will be used to mitigate known and potential adverse effects that might result from reuse plans. For more information on Fort Monroe's historic properties, see our website at http://tradoc.monroe.army.mil/dpw/crm.asp. For information on the Local Redevelopment Authority, see their website at www.hampton.va.us.fort_monroe.

This process will not encompass development of reuse plans for Fort Monroe. Under BRAC, that function is the purview of the Commonwealth of Virginia, which has reversionary rights to much of the land by deed, and of the officially recognized Local Redevelopment Authority.

A Section 106 consultation meeting is scheduled for September 20, 2006, 1:30-4:30 PM at the Bay Breeze Community Center on Fort Monroe. You may wish to attend this meeting to

learn more about Fort Monroe and the BRAC closure and reuse processes. Other attendees include the Virginia State Historic Preservation Officer, the Advisory Council on Historic Preservation, historical societies, veterans' organizations, Virginia's state-recognized tribes and other interested parties. The local point of contact for the section 106 process is Fort Monroe's environmental coordinator, Jennifer Guerrero. Please forward the name and contact information of your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Ms. Guerrero at (757) 788-5363 or e-mail jennifer.lee.guerrero@us.army.mil NLT September 5, 2006. Additionally, provide a list of individuals from your organization who will attend the meeting. Members of the BRAC National Environmental Policy Act Support Team are assisting Fort Monroe in Section 106 compliance.

We understand that there may be issues the Absentee-Shawnee Tribe of Indians of Oklahoma does not wish to discuss in a public venue and will work with you to have separate conversations, if desired, at mutually agreeable venues. We look forward to working with you.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

Fort Monroe Information Paper

Fort Monroe lies on a peninsula known as Old Point Comfort. Construction of Fort Monroe began in 1819. Land-building activities have approximately doubled the size of Old Point Comfort since the 1840's. Fort Monroe is the fourth fort on Old Point Comfort; the first was Fort Algernon (1609-1612), then the Fort at Old Point Comfort (1632-1667), and then Fort George (1728-1749). Due to the land-building activities, evidence of occupations of Old Point Comfort before Fort Monroe was constructed are expected to be located in the area roughly bounded by Patch Road to the west, Ingalls Road to the south, Fenwick Road on the east, and Griffiths Road on the north (see enclosures). Maps and birds-eye view drawings dating from the 1860's or earlier north of Griffiths Road depict a narrow, sand beach, roughly centered along Fenwick Road. This beach would have been subjected to periodic tidal surf and flooding and was probably unsuitable for long-term occupation.

All of the Fort Monroe National Historic Landmark is assigned archaeological site number 44HT27, with discreet loci of archaeological deposits within it. Most of the deposits are associated with the occupation of Fort Monroe; however, a few Native American loci dating to the Middle Woodland and Late Woodland periods are known, and the Kecoughtan village of the Powhatan Confederation lay approximately one mile southwest of Old Point Comfort at the time Fort Algernon was erected. Due to the land-building activities, the intact Native American loci are three feet or more below the current ground surface. The Army does not believe that any Native American Graves Protection and Repatriation Act Section 5 or 6 items have been found on those sites, but would be willing to electronically transmit the artifact lists to you for review.

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

JAN 29 2007

Office of the Garrison Commander

The Honorable Larry Nuckolls, Governor
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee, OK 74801

Dear Governor Nuckolls:

As part of Base Realignment and Closure (BRAC) actions for Fort Monroe, VA, participation in the National Historic Preservation Act, Section 106 consultation process is offered to the Absentee-Shawnee Tribe of Indians of Oklahoma. To assist in your decision on participation, a disk is enclosed (Encl 1) with information about Native American sites at Fort Monroe. The sites are at Loci 8, 11, and 20 of archaeological site 44HT27. Loci 8 and 11 were discovered in the Phase I survey. No additional research has taken place at Locus 11, but Phase II excavations were conducted at Locus 8. Locus 20 was unexpectedly discovered as a deeply buried site during the renovation of a building, and Phase II testing was performed.

Enclosure 2 contains the minutes from the September 20, 2006, potential consulting parties meeting. A follow-up meeting is tentatively scheduled for March 2007. For details of the follow-meeting and to answer any questions you may have, please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero, at (757) 788-5363 or e-mail at Jennifer.lee.guerrero@us.army.mil. To facilitate discussions, please forward the name and method of contacting your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Mrs. Guerrero.

Sincerely,

for Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosures

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

MAR 2 0 2007

Office of the Garrison Commander

The Honorable Larry Nuckolls, Governor
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee, OK 74801

Dear Governor Nuckolls:

Fort Monroe will host a Section 106 consultation meeting pursuant to the National Historic Preservation Act requirements for the Base Realignment and Closure and reuse of Fort Monroe. This meeting is scheduled for April 10, 2007, 1:00-4:00 PM at the Bay Breeze Community Center located on Fort Monroe. We received your request to be included as a consulting party and invite you to join us. A list of the other consulting parties is enclosed for your information.

At this meeting we will discuss the consultation process and come to an agreement on how best to proceed. We will also discuss the steps the Army has taken to date to identify historic properties, and how we can make relevant documents available to the public. If it is deemed appropriate by those in attendance, we may begin discussing a framework for developing a programmatic agreement.

Please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail Jennifer.lee.guerrero@us.army.mil regarding your availability to attend this meeting.

A copy of this letter has been provided to Ms. Karen Kaniatobe, Tribal Historic Preservation Officer, Absentee-Shawnee Tribe of Indians of Oklahoma, 2025 S. Gordon Cooper Drive, Shawnee, OK 74801.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS FORT MONROE
102 MCNAIR DRIVE
FORT MONROE, VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

AUG 2 4 2006

Office of the Garrison Commander

The Honorable Charles D. Enyart
Chief
Eastern Shawnee Tribe of Oklahoma
P.O. Box 350
Seneca, MO 64865

Dear Chief Enyart:

Fort Monroe invites the Eastern Shawnee Tribe of Oklahoma to participate in the National Historic Preservation Act (NHPA) Section 106 consultation process for the Base Realignment and Closure (BRAC) and reuse of Fort Monroe, a national historic landmark. Fort Monroe is scheduled to close as an active Army installation in the year 2011. We are contacting you because Fort Monroe is located in the area that might have been part of the territory once occupied by the Shawnee. Geographic and historical information pertinent to the Eastern Shawnee Tribe of Oklahoma is located at the enclosure.

The purpose of the consultation in this BRAC is to develop a programmatic agreement to ensure that the Army meets its obligations under Sections 106 and 110 of the NHPA. This consultation will consider possible effects on historic properties and will be used to mitigate known and potential adverse effects that might result from reuse plans. For more information on Fort Monroe's historic properties, see our website at http://tradoc.monroe.army.mil/dpw/crm.asp. For information on the Local Redevelopment Authority, see their website at www.hampton.va.us.fort_monroe.

This process will not encompass development of reuse plans for Fort Monroe. Under BRAC, that function is the purview of the Commonwealth of Virginia, which has reversionary rights to much of the land by deed, and of the officially recognized Local Redevelopment Authority.

A Section 106 consultation meeting is scheduled for September 20, 2006, 1:30-4:30 PM at the Bay Breeze Community Center on Fort Monroe. You may wish to attend this meeting to

learn more about Fort Monroe and the BRAC closure and reuse processes. Other attendees include the Virginia State Historic Preservation Officer, the Advisory Council on Historic Preservation, historical societies, veterans' organizations, Virginia's state-recognized tribes and other interested parties. The local point of contact for the section 106 process is Fort Monroe's environmental coordinator, Jennifer Guerrero. Please forward the name and contact information of your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Ms. Guerrero at (757) 788-5363 or e-mail jennifer.lee.guerrero@us.army.mil NLT September 5, 2006. Additionally, provide a list of individuals from your organization who will attend the meeting. Members of the BRAC National Environmental Policy Act Support Team are assisting Fort Monroe in Section 106 compliance.

We understand that there may be issues the Eastern Shawnee Tribe of Oklahoma does not wish to discuss in a public venue and will work with you to have separate conversations, if desired, at mutually agreeable venues. We look forward to working with you.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

Fort Monroe Information Paper

Fort Monroe lies on a peninsula known as Old Point Comfort. Construction of Fort Monroe began in 1819. Land-building activities have approximately doubled the size of Old Point Comfort since the 1840's. Fort Monroe is the fourth fort on Old Point Comfort; the first was Fort Algernon (1609-1612), then the Fort at Old Point Comfort (1632-1667), and then Fort George (1728-1749). Due to the land-building activities, evidence of occupations of Old Point Comfort before Fort Monroe was constructed are expected to be located in the area roughly bounded by Patch Road to the west, Ingalls Road to the south, Fenwick Road on the east, and Griffiths Road on the north (see enclosures). Maps and birds-eye view drawings dating from the 1860's or earlier north of Griffiths Road depict a narrow, sand beach, roughly centered along Fenwick Road. This beach would have been subjected to periodic tidal surf and flooding and was probably unsuitable for long-term occupation.

All of the Fort Monroe National Historic Landmark is assigned archaeological site number 44HT27, with discreet loci of archaeological deposits within it. Most of the deposits are associated with the occupation of Fort Monroe; however, a few Native American loci dating to the Middle Woodland and Late Woodland periods are known, and the Kecoughtan village of the Powhatan Confederation lay approximately one mile southwest of Old Point Comfort at the time Fort Algernon was erected. Due to the land-building activities, the intact Native American loci are three feet or more below the current ground surface. The Army does not believe that any Native American Graves Protection and Repatriation Act Section 5 or 6 items have been found on those sites, but would be willing to electronically transmit the artifact lists to you for review.

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

JAN 29 2007

Office of the Garrison Commander

The Honorable Charles D. Enyart
Chief
Eastern Shawnee Tribe of Oklahoma
P.O. Box 350
Seneca, MO 64865

Dear Chief Enyart:

As part of Base Realignment and Closure (BRAC) actions for Fort Monroe, VA, participation in the National Historic Preservation Act, Section 106 consultation process is offered to the Eastern Shawnee Tribe of Oklahoma. To assist in your decision on participation, a disk is enclosed (Encl 1) with information about Native American sites at Fort Monroe. The sites are at Loci 8, 11, and 20 of archaeological site 44HT27. Loci 8 and 11 were discovered in the Phase I survey. No additional research has taken place at Locus 11, but Phase II excavations were conducted at Locus 8. Locus 20 was unexpectedly discovered as a deeply buried site during the renovation of a building, and Phase II testing was performed.

Enclosure 2 contains the minutes from the September 20, 2006, potential consulting parties meeting. A follow-up meeting is tentatively scheduled for March 2007. For details of the follow-meeting and to answer any questions you may have, please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero, at (757) 788-5363 or e-mail at Jennifer.lee.guerrero@us.army.mil. To facilitate discussions, please forward the name and method of contacting your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Mrs. Guerrero.

Sincerely,

for Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosures

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

MAR 2 0 2007

Office of the Garrison Commander

Ms. Robin Dushane
Preservation Services
Eastern Shawnee Tribe of Oklahoma
P.O. Box 350
Seneca, MO 64865

Dear Ms. Dushane:

Fort Monroe will host a Section 106 consultation meeting pursuant to the National Historic Preservation Act requirements for the Base Realignment and Closure and reuse of Fort Monroe. This meeting is scheduled for April 10, 2007, 1:00-4:00 PM at the Bay Breeze Community Center located on Fort Monroe. A list of the other consulting parties is enclosed for your information.

At this meeting we will discuss the consultation process and come to an agreement on how best to proceed. We will also discuss the steps the Army has taken to date to identify historic properties, and how we can make relevant documents available to the public. If it is deemed appropriate by those in attendance, we may begin discussing a framework for developing a programmatic agreement.

Please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail Jennifer.lee.guerrero@us.army.mil regarding your availability to attend this meeting.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

List of Consulting Parties as of March 2007:

Absentee-Shawnee Tribe of Indians of Oklahoma
Advisory Council on Historic Preservation
APVA Preservation Virginia
Buckroe Civic Association
Citizens for a Fort Monroe National Park, Inc.
City of Hampton
Civil War Preservation Trust
Coast Defense Study Group
Commonwealth of Virginia
Diocese of Richmond
Federal Area Development Authority
Hampton University
National Historic Landmark Stewards Association
National Park Service
National Parks Conservation Association
National Trust for Historic Preservation
Norfolk Historical Society
Norfolk Preservation Alliance
Phoebus Civic Association
Phoebus Improvement League
Shawnee Tribe
The American Legion Post 48
The Archeological Society of Virginia
The Casemate Museum Foundation, Inc.
The Contraband Historical Society
The Old Point National Bank
United Daughters of the Confederacy
Virginia Council on Indians
Virginia Department of Environmental Quality, Office of Remediation Federal Facilities Program
Virginia Department of Historic Resources

DEPARTMENT OF THE ARMY
HEADQUARTERS FORT MONROE
102 MCNAIR DRIVE
FORT MONROE, VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

AUG 2 4 2006

Office of the Garrison Commander

The Honorable Leo R. Henry
Chief
Tuscarora Nation
2006 Mt. Hope Road
Lewiston, NY 14092

Dear Chief Henry:

Fort Monroe invites the Tuscarora Nation to participate in the National Historic Preservation Act (NHPA) Section 106 consultation process for the Base Realignment and Closure (BRAC) and reuse of Fort Monroe, a national historic landmark. Fort Monroe is scheduled to close as an active Army installation in the year 2011. We are contacting you because Fort Monroe is located in the area that might have been part of the territory once occupied by the Tuscarora. Geographic and historical information pertinent to the Tuscarora Nation is located at the enclosure.

The purpose of the consultation in this BRAC is to develop a programmatic agreement to ensure that the Army meets its obligations under Sections 106 and 110 of the NHPA. This consultation will consider possible effects on historic properties and will be used to mitigate known and potential adverse effects that might result from reuse plans. For more information on Fort Monroe's historic properties, see our website at http://tradoc.monroe.army.mil/dpw/crm.asp. For information on the Local Redevelopment Authority, see their website at www.hampton.va.us.fort_monroe.

This process will not encompass development of reuse plans for Fort Monroe. Under BRAC, that function is the purview of the Commonwealth of Virginia, which has reversionary rights to much of the land by deed, and of the officially recognized Local Redevelopment Authority.

A Section 106 consultation meeting is scheduled for September 20, 2006, 1:30-4:30 PM at the Bay Breeze Community Center on Fort Monroe. You may wish to attend this meeting to

learn more about Fort Monroe and the BRAC closure and reuse processes. Other attendees include the Virginia State Historic Preservation Officer, the Advisory Council on Historic Preservation, historical societies, veterans' organizations, Virginia's state-recognized tribes and other interested parties. The local point of contact for the section 106 process is Fort Monroe's environmental coordinator, Jennifer Guerrero. Please forward the name and contact information of your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Ms. Guerrero at (757) 788-5363 or e-mail jennifer.lee.guerrero@us.army.mil NLT September 5, 2006. Additionally, provide a list of individuals from your organization who will attend the meeting. Members of the BRAC National Environmental Policy Act Support Team are assisting Fort Monroe in Section 106 compliance.

We understand that there may be issues the Tuscarora Nation does not wish to discuss in a public venue and will work with you to have separate conversations, if desired, at mutually agreeable venues. We look forward to working with you.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

Fort Monroe Information Paper

Fort Monroe lies on a peninsula known as Old Point Comfort. Construction of Fort Monroe began in 1819. Land-building activities have approximately doubled the size of Old Point Comfort since the 1840's. Fort Monroe is the fourth fort on Old Point Comfort; the first was Fort Algernon (1609-1612), then the Fort at Old Point Comfort (1632-1667), and then Fort George (1728-1749). Due to the land-building activities, evidence of occupations of Old Point Comfort before Fort Monroe was constructed are expected to be located in the area roughly bounded by Patch Road to the west, Ingalls Road to the south, Fenwick Road on the east, and Griffiths Road on the north (see enclosures). Maps and birds-eye view drawings dating from the 1860's or earlier north of Griffiths Road depict a narrow, sand beach, roughly centered along Fenwick Road. This beach would have been subjected to periodic tidal surf and flooding and was probably unsuitable for long-term occupation.

All of the Fort Monroe National Historic Landmark is assigned archaeological site number 44HT27, with discreet loci of archaeological deposits within it. Most of the deposits are associated with the occupation of Fort Monroe; however, a few Native American loci dating to the Middle Woodland and Late Woodland periods are known, and the Kecoughtan village of the Powhatan Confederation lay approximately one mile southwest of Old Point Comfort at the time Fort Algernon was erected. Due to the land-building activities, the intact Native American loci are three feet or more below the current ground surface. The Army does not believe that any Native American Graves Protection and Repatriation Act Section 5 or 6 items have been found on those sites, but would be willing to electronically transmit the artifact lists to you for review.

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

REPLY TO
ATTENTION OF

JAN 2 9 2007

Office of the Garrison Commander

The Honorable Leo R. Henry
Chief
Tuscarora Nation
2006 Mt. Hope Road
Lewiston, NY 14092

Dear Chief Henry:

As part of Base Realignment and Closure (BRAC) actions for Fort Monroe, VA, participation in the National Historic Preservation Act, Section 106 consultation process is offered to the Tuscarora Nation. To assist in your decision on participation, a disk is enclosed (Encl 1) with information about Native American sites at Fort Monroe. The sites are at Loci 8, 11, and 20 of archaeological site 44HT27. Loci 8 and 11 were discovered in the Phase I survey. No additional research has taken place at Locus 11, but Phase II excavations were conducted at Locus 8. Locus 20 was unexpectedly discovered as a deeply buried site during the renovation of a building, and Phase II testing was performed.

Enclosure 2 contains the minutes from the September 20, 2006, potential consulting parties meeting. A follow-up meeting is tentatively scheduled for March 2007. For details of the follow-meeting and to answer any questions you may have, please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero, at (757) 788-5363 or e-mail at Jennifer.lee.guerrero@us.army.mil. To facilitate discussions, please forward the name and method of contacting your tribal representative, traditional religious leader, or preferred Native American Graves Protection and Repatriation Act point of contact to Mrs. Guerrero.

Sincerely,

Melissa A. Magowan
for Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosures

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

MAR 2 0 2007

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Mr. Neil Patterson, Jr.
Director, Tuscarora Environmental Program
Tuscarora Nation of New York
2045 Upper Mountain Road
Sanborn, NY 14132

Dear Mr. Patterson:

Fort Monroe will host a Section 106 consultation meeting pursuant to the National Historic Preservation Act requirements for the Base Realignment and Closure and reuse of Fort Monroe. This meeting is scheduled for April 10, 2007, 1:00-4:00 PM at the Bay Breeze Community Center located on Fort Monroe. A list of the other consulting parties is enclosed for your information.

At this meeting we will discuss the consultation process and come to an agreement on how best to proceed. We will also discuss the steps the Army has taken to date to identify historic properties, and how we can make relevant documents available to the public. If it is deemed appropriate by those in attendance, we may begin discussing a framework for developing a programmatic agreement.

Please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail Jennifer.lee.guerrero@us.army.mil regarding your availability to attend this meeting.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

List of Consulting Parties as of March 2007:

Absentee-Shawnee Tribe of Indians of Oklahoma
Advisory Council on Historic Preservation
APVA Preservation Virginia
Buckroe Civic Association
Citizens for a Fort Monroe National Park, Inc.
City of Hampton
Civil War Preservation Trust
Coast Defense Study Group
Commonwealth of Virginia
Diocese of Richmond
Federal Area Development Authority
Hampton University
National Historic Landmark Stewards Association
National Park Service
National Parks Conservation Association
National Trust for Historic Preservation
Norfolk Historical Society
Norfolk Preservation Alliance
Phoebus Civic Association
Phoebus Improvement League
Shawnee Tribe
The American Legion Post 48
The Archeological Society of Virginia
The Casemate Museum Foundation, Inc.
The Contraband Historical Society
The Old Point National Bank
United Daughters of the Confederacy
Virginia Council on Indians
Virginia Department of Environmental Quality, Office of Remediation Federal Facilities Program
Virginia Department of Historic Resources

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT MONROE
102 MCNAIR DRIVE
FORT MONROE VIRGINIA 23651-1047

MAR 2 0 2007

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Ms. Deanna Beacham
Program Specialist
Virginia Council on Indians
P.O. Box 1475
Richmond, VA 23218

Dear Ms. Beacham:

Fort Monroe will host a Section 106 consultation meeting pursuant to the National Historic Preservation Act requirements for the Base Realignment and Closure and reuse of Fort Monroe. This meeting is scheduled for April 10, 2007, 1:00-4:00 PM at the Bay Breeze Community Center located on Fort Monroe. We received your request to be included as a consulting party and invite you to join us. A list of the other consulting parties is enclosed for your information.

At this meeting we will discuss the consultation process and come to an agreement on how best to proceed. We will also discuss the steps the Army has taken to date to identify historic properties, and how we can make relevant documents available to the public. If it is deemed appropriate by those in attendance, we may begin discussing a framework for developing a programmatic agreement.

Please contact Fort Monroe's Environmental Coordinator, Jennifer Guerrero at (757)788-5363 or e-mail Jennifer.lee.guerrero@us.army.mil regarding your availability to attend this meeting.

Sincerely,

Jason T. Evans
Colonel, U.S. Army
Commanding

Enclosure

MARSTEL DAY
CONSERVATION & CONSULTING
FROM SEA TO STARS

www.marstel-day.com

February 20, 2009

Ms. Ellie Irons
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

Dear Ms. Irons:

In compliance with the National Environmental Policy Act of 1969 (NEPA) and the Endangered Species Act of 1973 (ESA), the Department of the Army is preparing an Environmental Impact Statement (EIS) for the disposal and reuse of Fort Monroe in Hampton, Virginia, slated for closure under the Base Realignment and Closure Act of 2005.

Fort Monroe is a 570-acre U.S. Army garrison located at the southeastern tip of the Virginia Lower Peninsula between Hampton Roads and the Lower Chesapeake Bay. It currently houses the headquarters for the U.S. Army Training and Doctrine Command (TRADOC), the Installation Management Command (IMCOM) Northeast Region Headquarters, the U.S. Army Network Enterprise Technology Command (NETCOM) Northeast Region Headquarters, the Army Contracting Agency Northern Region Office, the U.S. Army Accessions Command and U.S. Army Cadet Command.

The proposed Army primary action is to dispose of the surplus property generated by the BRAC-mandated closure of Fort Monroe. Reuse of Fort Monroe by others is a secondary action resulting from disposal. The Army identified two disposal alternatives consisting of early transfer and traditional disposal, a caretaker status alternative and the no action alternative, required by NEPA. Reuse scenarios are evaluated as secondary actions. These scenarios encompass the community's reuse plan and include higher and lower levels of development intensities. The Army expresses no preference with respect to reuse scenarios. The EIS will analyze each alternative's impact upon the natural and cultural environments in the surrounding vicinity. A map showing the location of the installation is included for your reference.

Army regulations require consideration of state-listed species in all Army actions. We are requesting a list of state listed threatened, endangered, or candidate species, as well as sensitive species known to occur, or potentially occurring on or in the vicinity of Fort Monroe (please see attached map). Also, we would appreciate information on any other sensitive natural resource that could be impacted by the proposed action. Furthermore, the Army invites comment from your Department on any pertinent conservation measures or concerns involving unique and rare areas/habitats and the species that may occur there.

If your office has any information available on this issue, please send it to:

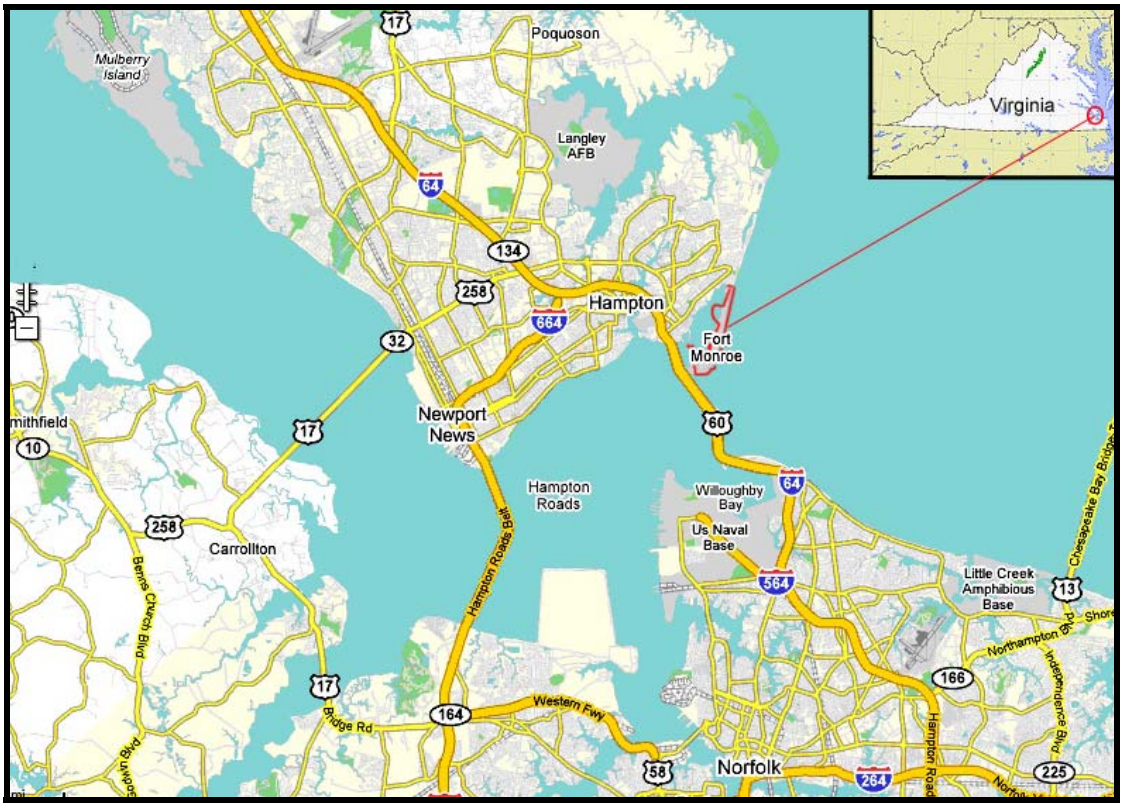
Ms. Holly Bisbee
Marstel-Day, LLC
2217 Princess Anne Street, Suite 101-101A
Fredericksburg, VA 22401

Thank you in advance for your assistance in this matter. If you have any questions, or require additional information, please contact me at 757-439-8147, or by email at rm@marstel-day.com

Sincerely,

Richard Muller

2217 Princess Anne Street, Suite 101-101A, Fredericksburg, VA 22401 540-371-3338
218 North Lee Street, Suite 300, Alexandria, VA 22314 703-519-3777
1736 Franklin Street, Suite 500, Oakland, CA 94612 510-663-0936



Location Map: Fort Monroe and surrounding vicinity

2217 Princess Anne Street, Suite 101-101A, Fredericksburg, VA 22401 540-371-3338
218 North Lee Street, Suite 300, Alexandria, VA 22314 703-519-3777
1736 Franklin Street, Suite 500, Oakland, CA 94612 510-663-0936

MARSTEL DAY
CONSERVATION & CONSULTING
FROM SEA TO STARS

www.marstel-day.com

February 20, 2008

Ms. Karen Mayne / Ms. Kim Marbain
US Fish and Wildlife Service
VA Field Office
Division of Ecological Services
6669 Short Lane
Gloucester, VA 23061

Dear Ms. Mayne/ Ms. Marbain:

In compliance with the National Environmental Policy Act of 1969 (NEPA) and the Endangered Species Act of 1973 (ESA), the Department of the Army is preparing an Environmental Impact Statement (EIS) for the disposal and reuse of Fort Monroe in Hampton, Virginia, slated for closure under the Base Realignment and Closure Act of 2005.

Fort Monroe is a 570-acre U.S. Army garrison located at the southeastern tip of the Virginia Lower Peninsula between Hampton Roads and the Lower Chesapeake Bay. It currently houses the headquarters for the U.S. Army Training and Doctrine Command (TRADOC), the Installation Management Command (IMCOM) Northeast Region Headquarters, the U.S. Army Network Enterprise Technology Command (NETCOM) Northeast Region Headquarters, the Army Contracting Agency Northern Region Office, the U.S. Army Accessions Command and U.S. Army Cadet Command.

The proposed Army primary action is to dispose of the surplus property generated by the BRAC-mandated closure of Fort Monroe. Reuse of Fort Monroe by others is a secondary action resulting from disposal. The Army identified two disposal alternatives consisting of early transfer and traditional disposal, a caretaker status alternative and the no action alternative, required by NEPA. Reuse scenarios are evaluated as secondary actions. These scenarios encompass the community's reuse plan and include higher and lower levels of development intensities. The Army expresses no preference with respect to reuse scenarios. The EIS will analyze each alternative's impact upon the natural and cultural environments in the surrounding vicinity.

Army regulations require consideration of federally-listed species in all Army actions. We are requesting a list of federally listed threatened, endangered, or candidate species, as well as sensitive species known to occur, or potentially occurring on or in the vicinity of Fort Monroe. Also, we would appreciate information on any other sensitive natural resource that could be impacted by the proposed action. Furthermore, the Army invites comment from your Department on any pertinent conservation measures or concerns involving unique and rare areas/habitats and the species that may occur there. A map showing the location of the installation is included for your reference.

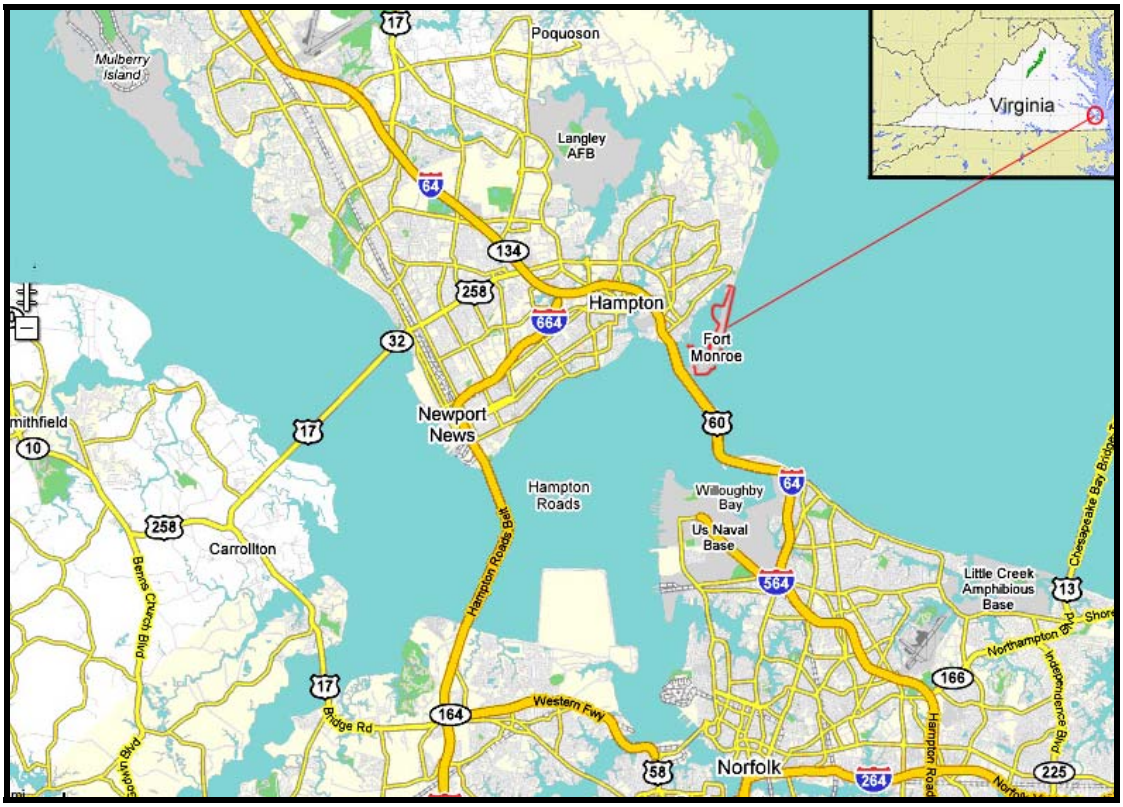
Ms. Holly Bisbee
Marstel-Day, LLC
2217 Princess Anne Street, Suite 101-101A
Fredericksburg, VA 22401

Thank you in advance for your assistance in this matter. If you have any questions, or require additional information, please contact me at 757-439-8147, or by email at rm@marstel-day.com

Sincerely,

Richard Muller

2217 Princess Anne Street, Suite 101-101A, Fredericksburg, VA 22401 540-371-3338
218 North Lee Street, Suite 300, Alexandria, VA 22314 703-519-3777
1736 Franklin Street, Suite 500, Oakland, CA 94612 510-663-0936



Location Map: Fort Monroe and surrounding vicinity

MARSTEL DAY
CONSERVATION & CONSULTING
FROM SEA TO STARS

www.marstel-day.com

July 24, 2009

Ms. Karen Mayne / Ms. Kim Marbain
U.S. Fish and Wildlife Service
VA Field Office – Division of Ecological Services
6669 Short Lane
Gloucester, VA 23061

Dear Ms. Mayne/ Ms. Marbain:

In compliance with the National Environmental Policy Act of 1969 (NEPA) and the Endangered Species Act of 1973 (ESA), the Department of the Army is preparing an Environmental Impact Statement (EIS) for the disposal and reuse of Fort Monroe in Hampton, Virginia, slated for closure under the Base Realignment and Closure Act of 2005.

Fort Monroe is a 570-acre U.S. Army garrison located at the southeastern tip of the Virginia Lower Peninsula between Hampton Roads and the Lower Chesapeake Bay. It currently houses the Management Command (IMCOM) Northeast Region Headquarters, the U.S. Army Network Enterprise Technology Command (NETCOM) Northeast Region Headquarters, the Army Contracting Agency Northern Region Office, the U.S. Army Accessions Command, and the U.S. Army Cadet Command.

The proposed Army primary action is to dispose of the surplus property generated by the BRAC-mandated closure of Fort Monroe. Reuse of Fort Monroe by others is a secondary action resulting from disposal. The Army identified two disposal alternatives consisting of early transfer and traditional disposal, a caretaker status alternative, and the no action alternative required by NEPA. Reuse scenarios are evaluated as secondary actions. These scenarios encompass the community's reuse plan and include higher and lower levels of development intensities. The Army expresses no preference with respect to reuse scenarios. The EIS will analyze each alternative's impact upon the natural and cultural environments in the surrounding vicinity. A map showing the location of the installation is included for your reference.

Army regulations require consideration of state- and federally-listed species in all Army actions. On 20 February 2009, we requested a list of federally-listed threatened, endangered, or candidate species, as well as sensitive species known to occur, or potentially occurring on or in the vicinity of Fort Monroe, VA, (please see attached map) from USFWS. However, we have no record of a response being received.

We would appreciate additional information on any other sensitive natural resource that could be impacted by the proposed action. Furthermore, the Army invites comment from your Department on any pertinent conservation measure or concerns involving unique and rare areas/habitats and the species that may occur there.

If your office has any information available on this issue, please send to the following address:

Ms. Holly Bisbee
Marstel-Day, LLC
2217 Princess Anne St. Suite 101-1A
Fredericksburg, VA 22401

2217 Princess Anne Street, Suite 101-1A, Fredericksburg, VA 22401 (540)371-3338

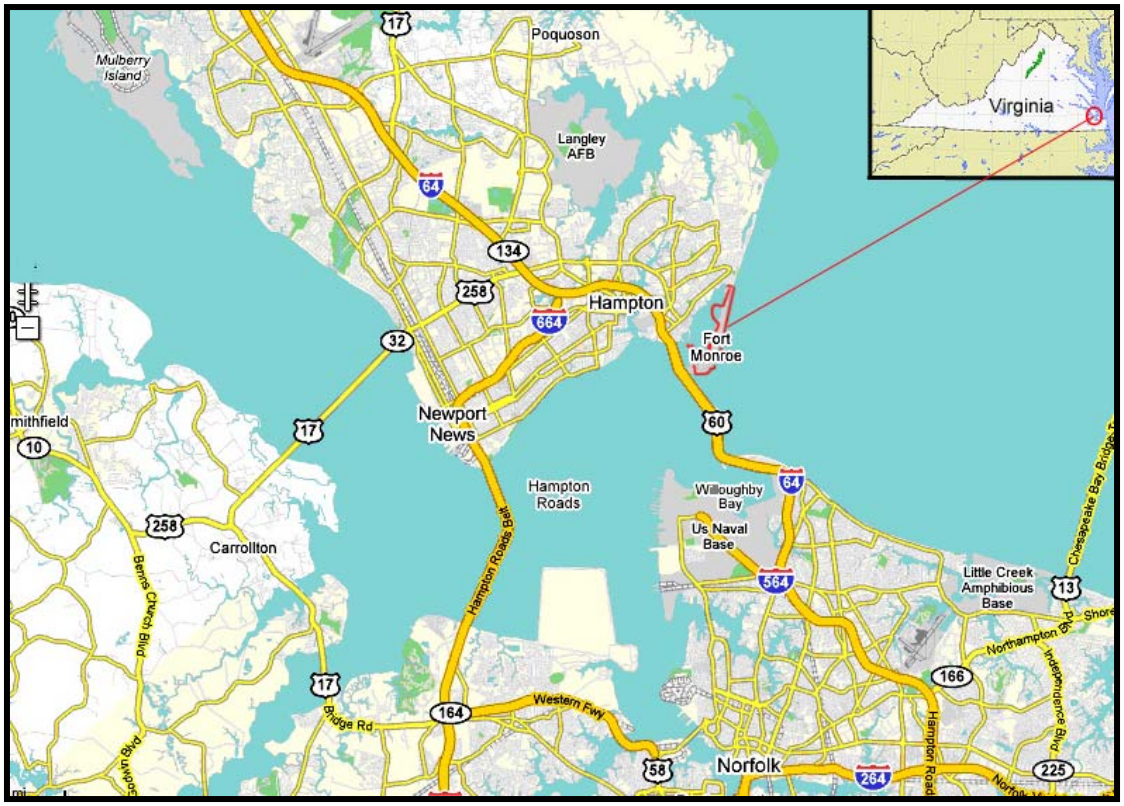
218 North Lee Street, Suite 300, Alexandria, VA 22314 (703)519-3777

1736 Franklin Street, Suite 500, Oakland, CA 94612 (510)663-0936

Thank you in advance for your assistance in this matter. If you have any questions, or require additional information, please contact me at (757)439-8147, or by email at rm@marstel-day.com.

Sincerely,

Rich Muller
Project Manager
Marstel-Day, LLC



Location Map: Fort Monroe and surrounding vicinity

2217 Princess Anne Street, Suite 101-1A, Fredericksburg, VA 22401 (540)371-3338

218 North Lee Street, Suite 300, Alexandria, VA 22314 (703)519-3777

1736 Franklin Street, Suite 500, Oakland, CA 94612 (510)663-0936

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
6669 Short Lane
Gloucester, Virginia 23061

SEP 23 2009

Ms. Holly Bisbee
Marstel-Day, LLC
2217 Princess Anne St., Suite 101-1A
Fredericksburg, Virginia 22401

Re: Fort Monroe-BRAC Project, City of Hampton, Virginia, Project # 2009-TA-0629

Dear Ms. Bisbee:

We have reviewed your request for information on Federally listed endangered and threatened species and designated critical habitat for the referenced project. The following comments are provided under provisions of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended.

This office responded to a previous request from Marstel-Day in February, 2009. That response letter is enclosed, for your information. The information contained in that previous letter remains current for the project area.

Species information and other pertinent information on project reviews within Virginia is available at our website http://www.fws.gov/northeast/virginiafield/Project_Reviews.html. If you have any questions, please contact Mike Drummond of this office at (804) 693-6694, extension 114.

Sincerely,

Cindy Schulz
Supervisor
Virginia Field Office

enclosure

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
6669 Short Lane
Gloucester, VA 23061

February 13, 2009

Mr. Richard Muller
Marstel Day
2217 Princess Anne Street,
Suite 101-101A,
Fredericksburg, Virginia 22401

Re: Ft. Monroe Species List,
Hampton, Virginia, TAILS
Project # 2009-SL-0147

Dear Mr. Muller:

The U.S. Fish and Wildlife Service (Service) has received your request to search our files for occurrences or habitat of threatened or endangered species at the above referenced area. The following comments are provided under provisions of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Attached is a list of species with Federal status and species of concern that have been documented or may occur in the county where your project is located. This list was prepared by this office and is based on information obtained from previous surveys for rare and endangered species. In addition to the species on the list there are also documented observations of loggerhead sea turtles (*Caretta caretta*), federally listed threatened, and a leatherback sea turtle (*Dermochely coriacae*), federally listed endangered, in the waters offshore of the base. Those waters are also classified as confirmed anadromous fish spawning for alewife (*Alosa pseudoharengus*), American shad (*Alosa sapidissima*), blueback herring (*Alosa aestivalis*), hickory shad (*A. mediocris*), stripped bass (*Morone saxtilis*), and yellow perch (*Perca flavescens*).

In order to ensure coordination with the State agencies, we consistently recommend that individuals contact the Virginia Department of Conservation and Recreation, Division of Natural Heritage **and** the Virginia Department of Game and Inland Fisheries, since each agency maintains a different database and has differing expertise and/or regulatory responsibility. You can contact these agencies at the following addresses:

Virginia Department of Game and Inland Fisheries
Environmental Services Section
P.O. Box 11104
Richmond, VA 23230
(804) 367-1000

Virginia Department of Conservation and Recreation
Division of Natural Heritage
217 Governor Street, 2nd Floor
Richmond, VA 23219
(804) 786-7951

If either of these agencies determines that your project may impact a federal listed, proposed, or candidate species OR federally designated critical habitat, please contact this office and provide a copy of the response letter from each agency and the above referenced project number; otherwise, further contact with this office is not necessary.

You can find species information and other pertinent information on project reviews within Virginia at our website http://www.fws.gov/northeast/virginiafield/Project_Reviews.html. If you have any questions or need further assistance, please contact Sumalee Hoskin at (804) 693-6694, extension 136.

Sincerely,

Tylan Dean
Acting Supervisor
Virginia Field Office

Enclosures

CITY OF HAMPTON, VIRGINIA

Federally Endangered, Threatened, Proposed, and Candidate Species

SCIENTIFIC NAME	COMMON NAME	STATUS
BIRDS		
Charadrius melodus	Piping plover	LT
INVERTEBRATES		
Cicindela dorsalis dorsalis	Northeastern beach tiger beetle	LT

Other Federally Protected Species

BIRDS		
Haliaeetus leucocephalus	Bald eagle	BGEPA

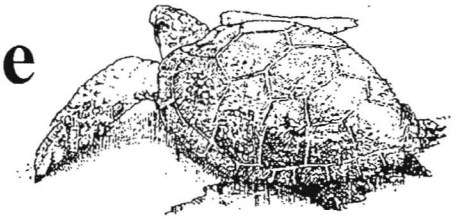
Species of Concern (No official Federal status)

VASCULAR PLANTS		
Trillium pusillum var. virginianum	Virginia least trillium	G3T2

September 18, 2008
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Loggerhead Sea Turtle

Caretta caretta



Description - The loggerhead sea turtle occurs in the Atlantic, Indian and Pacific Oceans; the Gulf of Mexico; and the Caribbean and Mediterranean Seas. In Virginia, loggerhead sea turtles are found throughout the Chesapeake Bay, around the barrier islands off the Eastern Shore, and off the coast in the Atlantic Ocean. The carapace (top shell) of the adult is hard, heart-shaped, and reddish-brown with an average length of 36.2 inches in the southeastern United States. The entire underside, sides of neck, and parts of the flippers are yellow or whitish. It has a large triangular head and each flipper has two claws.

Life History - This turtle is a marine species and spends most of its time in the ocean and estuaries where it feeds, breeds, and migrates. Loggerheads feed mainly on horseshoe crabs, but their diet also includes mollusks, crustaceans, jellyfish, fish, and various sea grasses. The loggerhead is the only sea turtle that nests as far north as Virginia. Loggerheads nest in small numbers along Virginia's coast and nesting usually occurs from April through September. Females dig shallow pits on the beach to deposit their eggs. Hatchlings emerge as a group and begin to crawl rapidly toward the ocean. After reaching the water, they find food and protection among floating mats of vegetation in the Gulf Stream. They can be found in Virginia's waters from May through November. They migrate south during the winter months.

Conservation - The loggerhead sea turtle was federally listed as a threatened species on July 28, 1978. Threats to this species are numerous: nest abandonment occurs from human disturbance; shoreline stabilization structures deter nesting; and beach development results in increased light intensity inland, causing hatchlings to become disoriented and travel inland where they die. Entanglement, ingestion, and contact with marine debris are hazards to sea turtles. Turtles can become entangled in trawling nets, pound nets, crab pot lines, and gill nets and subsequently drown. Boat propellers can wound or kill sea turtles.

What You Can Do To Help - Watch out for sea turtles while boating in Virginia's waters! If you find a stranded, wounded, or dead sea turtle please contact one of the following organizations:

Virginia Institute of Marine Science
(804) 642-7313

Virginia Marine Science Museum
(757) 437-4949

National Marine Fisheries Service
(508) 281-9291

References

Keinath, J.A. and J.A. Musick. 1991. Loggerhead sea turtle. Pages 445-448 in K. Terwilliger, ed. Virginia's Endangered Species, Proceedings of a Symposium. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

Mitchell, J.C. 1994. The reptiles of Virginia. Smithsonian Institution Press, Washington and London.

National Marine Fisheries Service and U.S. Fish and Wildlife Service. 1991. Recovery plan for U.S. population of loggerhead turtle. National Marine Fisheries Service, Washington, D.C.

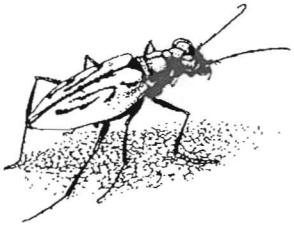
Nelson, D.A. 1988. Life history and environmental requirements of loggerhead turtles. U.S. Fish and Wildlife Service Biological Report 88(23). U.S. Army Corps of Engineers TR EL-86-2(Rev).

U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694
http://www.fws.gov
August 1999

U.S. Fish & Wildlife Service

Northeastern Beach Tiger Beetle

Cicindela dorsalis dorsalis



© K. Brown-Wing

Description - Historically, the northeastern beach tiger beetle was common on coastal beaches from Massachusetts to central New Jersey, and along the Chesapeake Bay in Maryland and Virginia. Currently, the only populations known to exist along the Atlantic Coast are in New Jersey and southeastern Massachusetts. The majority of populations occur in the Chesapeake Bay. This insect measures 0.5 inches in length. It has white to light tan wing covers, often with several fine grayish-green lines, and a bronze-green head and body.

Life History - Adult and larval tiger beetles are found on long, wide, dynamic beaches that have little human and vehicular activity, fine sand-particle size, and a high degree of exposure to tidal action. Adult beetles are present from June through August and are active on warm, sunny days where they can be seen feeding, mating, or basking along the water's edge. Adults are active predators that forage on small invertebrates or scavenge on dead fish, crabs, and amphipods. Larvae are sedentary predators that live in well-formed burrows from which they extend to capture passing prey. During the summer, adult tiger beetles lay eggs on the beach. After hatching, the larvae pass through three developmental stages and emerge from their burrows as adults two years following egg-laying.

Conservation - The northeastern beach tiger beetle was federally listed as a threatened species on August 7, 1990. Few northeastern beach tiger beetle sites are protected and many are threatened by human activities. Loss of this beetle from most of its range has been attributed primarily to destruction and disturbance of natural beach habitat from shoreline development, beach stabilization, and high levels of recreational use. Additional threats include pollution, pesticides, oil slicks, and off-road vehicle traffic. Natural limiting factors include winter storms, beach erosion, flood tides, hurricanes, parasites, and predators. Recovery for the tiger beetle depends to a large extent on re-establishing the subspecies across its former range along the Atlantic Coast and protecting it within the Chesapeake Bay.

What You Can Do To Help - If you plan to stabilize a tidal beach along the Chesapeake Bay or its tributaries, please contact the U.S. Fish and Wildlife Service. Such activity may require a federal permit, for more information contact:

U.S. Army Corps of Engineers
Norfolk District
803 Front Street
Norfolk, Virginia 23510-1096
(757) 441-7652

References

Knisley, C.B. 1991. Northeastern beach tiger beetle. Pages 233-234 in K. Terwilliger, ed. Virginia's Endangered Species, Proceedings of a Symposium. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

Knisley, C.B., J.I. Luebke, and D.R. Beatty. 1987. Natural history and population decline of the coastal tiger beetle, *Cicindela dorsalis dorsalis* Say (Coleoptera: Cicindelidae). Virginia Journal of Science 38: 293-303.

U.S. Fish and Wildlife Service. 1994. Northeastern beach tiger beetle (*Cicindela dorsalis dorsalis* Say) recovery plan. Hadley, Massachusetts.

U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694
http://www.fws.gov

August 1999

Piping Plover

Charadrius melodus

© J. Zickefoose

Description - Piping plovers occur in three disjunct populations in North America: Northern Great Plains, Great Lakes, and Atlantic Coast. The piping plover is a 5 ½ inch long pale grayish-brown shorebird with a white breast. During the breeding season, it has a black breast band which is sometimes incomplete and a black bar between its eyes. The bill is dull orange with a black tip and the legs and feet are orange.

Life History - The piping plover nesting season is from late April to late July with one brood raised per year. If there is a disturbance or the nest is lost, the birds may renest. Plovers nest on beaches, dunes, and washover areas. They also nest on areas where suitable dredged material is deposited. The nest is a shallow scrape in the sand dug by the adults and is usually lined with broken seashells and small pebbles. The female usually lays four eggs. The chicks are mobile and able to feed themselves within hours of hatching. Piping plovers feed on small invertebrates in intertidal surf zones, mud flats, tidal pool edges, barrier flats, and sand flats and along the ocean and barrier bays. Plovers migrate to breeding grounds from February through early April, and to wintering grounds from late July through September.

Conservation - The piping plover was federally listed as a threatened species along the Atlantic Coast on January 10, 1986. In the Northern Great Plains, it is federally listed threatened and in the Great Lakes, endangered. Destruction and degradation of habitat and disturbance during the nesting season by humans and pets are threats to this species. Piping plovers are extremely sensitive to disturbance during the nesting season. Predation by red foxes, skunks, raccoons, feral cats, herring gulls, fish crows, grackles, and ghost crabs is an additional threat to the eggs and young.

What You Can Do To Help - Respect all signed or fenced shorebird nesting areas; stay as far away from these areas as possible. The birds and their eggs blend in with the sand and are difficult to see. Young birds are particularly vulnerable before they can fly and can be killed by vehicles or trapped in vehicle tracks. Watch for signs of adult birds calling, displaying a feigned broken wing, or flying or running ahead of you. Keep pets leashed or indoors during the nesting season; both dogs and cats are known to prey on eggs and chicks. Take care not to discard trash or food scraps on beaches used by nesting birds, as they attract predators that may prey on eggs and/or chicks.

To find out more about the piping plover contact:

Virginia Department of Game and Inland Fisheries
P.O. Box 11104
Richmond, Virginia 23230
(804) 367-1000

References

Cross, R.C. 1991. Piping plover. Pages 501-502 in K. Terwilliger, ed. Virginia's Endangered Spcies, Proceddings of a Symposium. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

U.S. Fish and Wildlife Service. 1985. Endangered and Threatened Wildlife and Plants: Determination of endangered and threatened status for the piping plover; final rule. Federal Register 50(238):50726-59734.

U.S. Fish and Wildlife Service, Region 5. 1994. You can help protect the piping plover. Newton Corner, Massachusetts.

U.S. Fish and Wildlife Service. 1996. Piping plover (*Charadrius melodus)* Atlantic Coast population, revised recovery plan. Hadley, Massachusetts.

U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694
http://www.fws.gov

August 1999

MARSTEL DAY
CONSERVATION & CONSULTING
FROM SEA TO STARS

www.marstel-day.com

December 11, 2008

Mr. David Cottingham, Director
NOAA
Ecology and Conservation District
14th and Constitution Avenue, NW
Washington, DC 20230

Dear Mr. Cottingham:

In compliance with the National Environmental Policy Act of 1969 (NEPA) and the Endangered Species Act of 1973 (ESA), the Department of the Army is preparing an Environmental Impact Statement (EIS) for the disposal and reuse of Fort Monroe in Hampton, Virginia, slated for closure under the Base Realignment and Closure Act of 2005.

Fort Monroe is a 570-acre U.S. Army garrison located at the southeastern tip of the Virginia Lower Peninsula between Hampton Roads and the Lower Chesapeake Bay. It currently houses the headquarters for the U.S. Army Training and Doctrine Command (TRADOC), the Installation Management Command (IMCOM) Northeast Region Headquarters, the U.S. Army Network Enterprise Technology Command (NETCOM) Northeast Region Headquarters, the Army Contracting Agency Northern Region Office, the U.S. Army Accessions Command and U.S. Army Cadet Command.

The proposed Army primary action is to dispose of the surplus property generated by the BRAC-mandated closure of Fort Monroe. Reuse of Fort Monroe by others is a secondary action resulting from disposal. The Army identified two disposal alternatives consisting of early transfer and traditional disposal, a caretaker status alternative and the no action alternative, required by NEPA. Reuse scenarios are evaluated as secondary actions. These scenarios encompass the community's reuse plan and include higher and lower levels of development intensities. The Army expresses no preference with respect to reuse scenarios. The EIS will analyze each alternative's impact upon the natural and cultural environments in the surrounding vicinity.

Army regulations require consideration of federally-listed species in all Army actions. We are requesting a list of federally listed threatened, endangered, or candidate species, as well as sensitive species known to occur, or potentially occurring on or in the vicinity of Fort Monroe. Also, we would appreciate information on any other sensitive natural resource that could be impacted by the proposed action. Furthermore, the Army invites comment from your Department on any pertinent conservation measures or concerns involving unique and rare areas/habitats and the species that may occur there. A map showing the location of the installation is included for your reference.

Mr. Richard Muller
Marstel-Day, LLC
2217 Princess Anne Street, Suite 101-101A
Fredericksburg, VA 22401

Thank you in advance for your assistance in this matter. If you have any questions, or require additional information, please contact me at 757-439-8147, or by email at rm@marstel-day.com

Sincerely,

Richard Muller

2217 Princess Anne Street, Suite 101-101A, Fredericksburg, VA 22401 540-371-3338
218 North Lee Street, Suite 300, Alexandria, VA 22314 703-519-3777
1736 Franklin Street, Suite 500, Oakland, CA 94612 510-663-0936

MARSTEL DAY
CONSERVATION & CONSULTING
FROM SEA TO STARS

www.marstel-day.com

July 24, 2009

John Nichols
National Marine Fisheries Service
Habitat Conservation Division
904 South Morris Street
Oxford, MD 21654

Dear Mr. Nichols:

In compliance with the National Environmental Policy Act of 1969 (NEPA) and the Endangered Species Act of 1973 (ESA), the Department of the Army is preparing an Environmental Impact Statement (EIS) for the disposal and reuse of Fort Monroe in Hampton, Virginia, slated for closure under the Base Realignment and Closure Act of 2005.

Fort Monroe is a 570-acre U.S. Army garrison located at the southeastern tip of the Virginia Lower Peninsula between Hampton Roads and the Lower Chesapeake Bay. It currently houses the Management Command (IMCOM) Northeast Region Headquarters, the U.S. Army Network Enterprise Technology Command (NETCOM) Northeast Region Headquarters, the Army Contracting Agency Northern Region Office, the U.S. Army Accessions Command, and the U.S. Army Cadet Command.

The proposed Army primary action is to dispose of the surplus property generated by the BRAC-mandated closure of Fort Monroe. Reuse of Fort Monroe by others is a secondary action resulting from disposal. The Army identified two disposal alternatives consisting of early transfer and traditional disposal, a caretaker status alternative, and the no action alternative required by NEPA. Reuse scenarios are evaluated as secondary actions. These scenarios encompass the community's reuse plan and include higher and lower levels of development intensities. The Army expresses no preference with respect to reuse scenarios. The EIS will analyze each alternative's impact upon the natural and cultural environments in the surrounding vicinity. A map showing the location of the installation is included for your reference.

Army regulations require consideration of state- and federally-listed species in all Army actions. On 11 December 2008, we requested a list of marine federally-listed threatened, endangered, or candidate species, as well as sensitive species known to occur, or potentially occurring on or in the vicinity of Fort Monroe, VA (please see attached map) from NOAA, Ecology and Conservation District. However, we have no record of a response from this office.

We would appreciate additional information on any other sensitive natural resource that could be impacted by the proposed action. Furthermore, the Army invites from your Department on any pertinent conservation measure or concerns involving unique and rare areas/habitats and the species that may occur there.

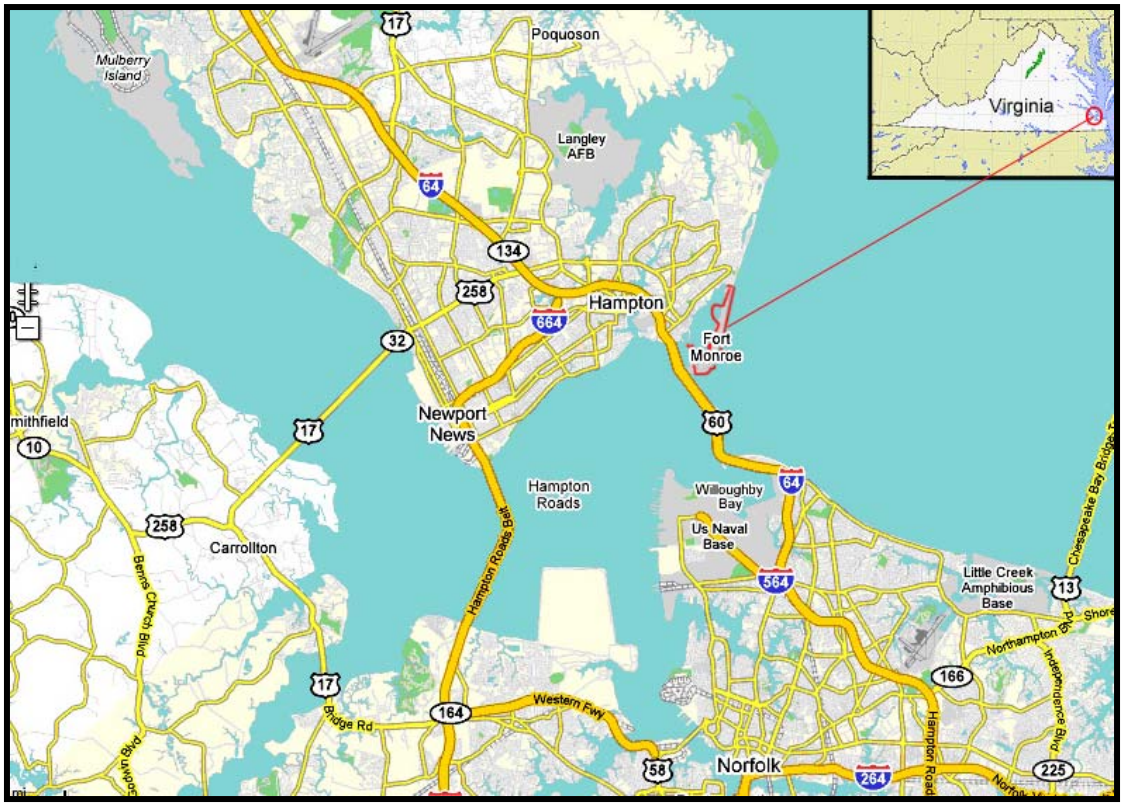
If your office has any information available on this issue, please send to the following address:

Ms. Holly Bisbee
Marstel-Day, LLC
2217 Princess Anne St. Suite 101-1A
Fredericksburg, VA 22401

Thank you in advance for your assistance in this matter. If you have any questions, or require additional information, please contact me at (757)439-8147, or by email at rm@marstel-day.com.

Sincerely,

Rich Muller
Project Manager
Marstel-Day, LLC



Location Map: Fort Monroe and surrounding vicinity

2217 Princess Anne Street, Suite 101-1A, Fredericksburg, VA 22401 (540)371-3338

218 North Lee Street, Suite 300, Alexandria, VA 22314 (703)519-3777

1736 Franklin Street, Suite 500, Oakland, CA 94612 (510)663-0936

MARSTEL DAY
CONSERVATION & CONSULTING
FROM SEA TO STARS

July 24, 2009

www.marstel-day.com

Mr. Tom Smith
VA Department of Conservation and Recreation
Natural Heritage Program
217 Governor Street, Suite 312
Richmond, VA 23219

Dear Mr. Smith:

In compliance with the National Environmental Policy Act of 1969 (NEPA) and the Endangered Species Act of 1973 (ESA), the Department of the Army is preparing an Environmental Impact Statement (EIS) for the disposal and reuse of Fort Monroe in Hampton, Virginia, slated for closure under the Base Realignment and Closure Act of 2005.

Fort Monroe is a 570-acre U.S. Army garrison located at the southeastern tip of the Virginia Lower Peninsula between Hampton Roads and the Lower Chesapeake Bay. It currently houses the Management Command (IMCOM) Northeast Region Headquarters, the U.S. Army Network Enterprise Technology Command (NETCOM) Northeast Region Headquarters, the Army Contracting Agency Northern Region Office, the U.S. Army Accessions Command, and the U.S. Army Cadet Command.

The proposed Army primary action is to dispose of the surplus property generated by the BRAC-mandated closure of Fort Monroe. Reuse of Fort Monroe by others is a secondary action resulting from disposal. The Army identified two disposal alternatives consisting of early transfer and traditional disposal, a caretaker status alternative, and the no action alternative required by NEPA. Reuse scenarios are evaluated as secondary actions. These scenarios encompass the community's reuse plan and include higher and lower levels of development intensities. The Army expresses no preference with respect to reuse scenarios. The EIS will analyze each alternative's impact upon the natural and cultural environments in the surrounding vicinity. A map showing the location of the installation is included for your reference.

Army regulations require consideration of state- and federally-listed species in all Army actions. On 20 February 2009, we requested a list of state- and federally-listed threatened, endangered, or candidate species, as well as sensitive species known to occur, or potentially occurring on or in the vicinity of Fort Monroe, VA (please see attached map) from VADEQ and USFWS. No response has been received.

We would appreciate additional information on any other sensitive natural resource that could be impacted by the proposed action. Furthermore, the Army invites comment from your Department on any pertinent conservation measure or concerns involving unique and rare areas/habitats and the species that may occur there.

If your office has any information available on this issue, please send to the following address:

Ms. Holly Bisbee
Marstel-Day, LLC
2217 Princess Anne St. Suite 101-1A
Fredericksburg, VA 22401

2217 Princess Anne Street, Suite 101-1A, Fredericksburg, VA 22401 (540)371-3338

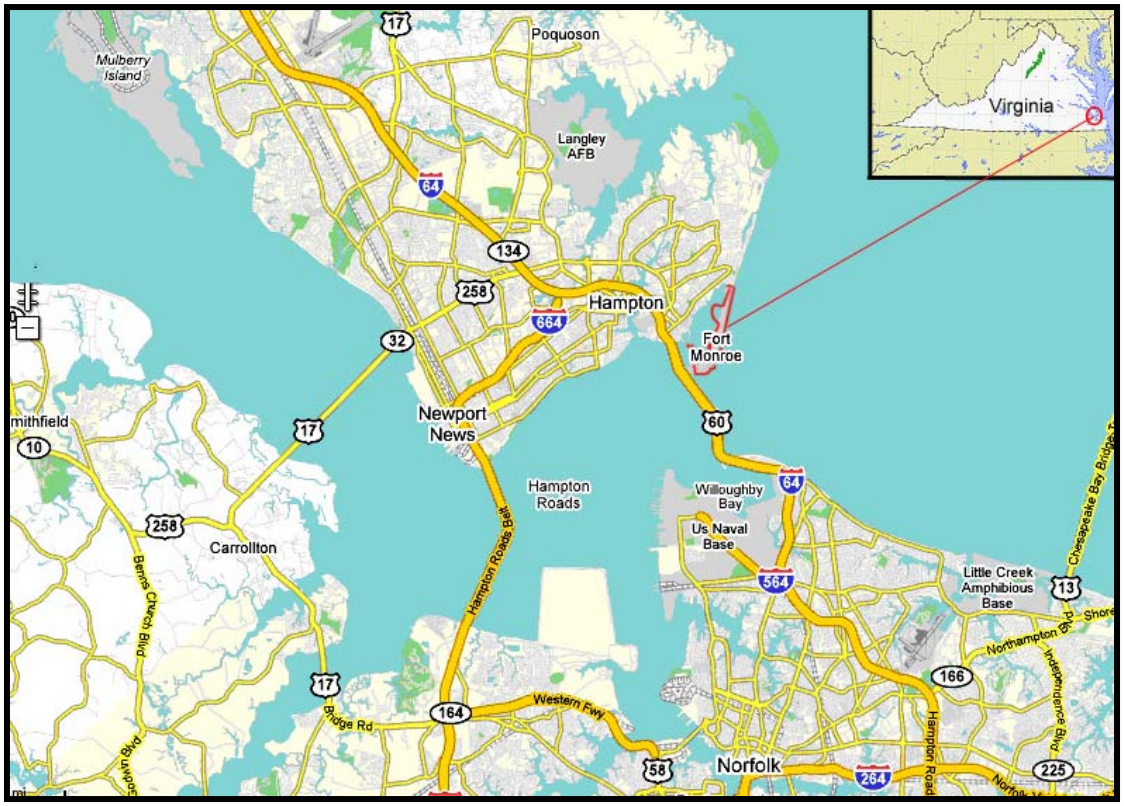
218 North Lee Street, Suite 300, Alexandria, VA 22314 (703)519-3777

1736 Franklin Street, Suite 500, Oakland, CA 94612 (510)663-0936

Thank you in advance for your assistance in this matter. If you have any questions, or require additional information, please contact me at (757)439-8147, or by email at rm@marstel-day.com.

Sincerely,

Rich Muller
Project Manager
Marstel-Day, LLC



Location Map: Fort Monroe and surrounding vicinity

2217 Princess Anne Street, Suite 101-1A, Fredericksburg, VA 22401 (540)371-3338

218 North Lee Street, Suite 300, Alexandria, VA 22314 (703)519-3777

1736 Franklin Street, Suite 500, Oakland, CA 94612 (510)663-0936

L. Preston Bryant, Jr.
Secretary of Natural Resources

Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

217 Governor Street
Richmond, Virginia 23219-2010
(804) 786-7951 FAX (804) 371-2674

August 5, 2009

Richard Muller
Marstel-Day, LLC
342 N. First Street
Hampton, VA 23664

Re: Fort Monroe Disposal and Reuse

Dear Mr. Muller:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

Biotics documents the presence of natural heritage resources in the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Conservation and Recreation (DCR), DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

In addition, our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

A fee of $590.00 has been assessed for the service of providing this information. Please find enclosed an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, **DCR - Division of Natural Heritage, 217 Governor Street Richmond, VA 23219.** Payment is due within thirty days of the invoice date. Please note the change of address for remittance of payment as of July 1, 2008. Late payment may result in the suspension of project review service for future projects.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Shirl Dressler at (804) 367-6913.

Should you have any questions or concerns, feel free to contact me at (804) 692-0984. Thank you for the opportunity to comment on this project.

Sincerely,

Kristal McKelvey

Kristal McKelvey
Coastal Zone Locality Liaison

Accounts Payable

COMMONWEALTH OF VIRGINIA
Department of Conservation and Recreation
217 Governor Street
Richmond, VA 23219

Fed I.D. # 54-6004497
DUNS # 809-74-4444

Make checks payable to the
TREASURER OF VIRGINIA
and mail to the address shown

Payment is due 30 days
after receipt of invoice.

INVOICE

Richard Muller
Marstel-Day, LLC
342 N. First Street
Hampton, VA 23664

Invoice: H-8287

Date: August 5, 2009

Please detach and return remittance copy with payment to ensure proper credit to your account.

Taxpayer I.D.# 54-2039988

Contact: René Hypes
Division of Natural Heritage
(804) 371-2671 FAX# (804) 371-2674 TDD (804) 786-2121

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
Impact Review	1	EA	90.00	90.00
PRIORITY SERVICE	1	EA	500.00	500.00
Element Occurrences	NA			
Site Reference				
Fort Monroe Disposal and Reuse				

Credit Information: 199 02 00 **10** 50317 02199 645

Amount Due: $590.00

The Department of Conservation and Recreation may charge interest on all past due accounts receivable in accordance with guidelines promulgated by the Department of accounts and at the underpayment rate prescribed in Section 58.1-15 of the Code of Virginia. Each past due account receivable may also be charged an additional amount which shall approximate the administrative cost incurred in collecting the past due amount. The Department may also assess late payment penalty fees as appropriate.

1 – Recipient Copy 2 – Remittance Copy 3 – Accounting Copy

MARSTEL DAY
CONSERVATION & CONSULTING
FROM SEA TO STARS

www.marstel-day.com

July 24, 2009

Virginia Department of Game and Inland Fisheries
Environmental Services Section
P.O. Box 11104
Richmond, VA 23230-1104

In compliance with the National Environmental Policy Act of 1969 (NEPA) and the Endangered Species Act of 1973 (ESA), the Department of the Army is preparing an Environmental Impact Statement (EIS) for the disposal and reuse of Fort Monroe in Hampton, Virginia, slated for closure under the Base Realignment and Closure Act of 2005.

Fort Monroe is a 570-acre U.S. Army garrison located at the southeastern tip of the Virginia Lower Peninsula between Hampton Roads and the Lower Chesapeake Bay. It currently houses the Management Command (IMCOM) Northeast Region Headquarters, the U.S. Army Network Enterprise Technology Command (NETCOM) Northeast Region Headquarters, the Army Contracting Agency Northern Region Office, the U.S. Army Accessions Command, and the U.S. Army Cadet Command.

The proposed Army primary action is to dispose of the surplus property generated by the BRAC-mandated closure of Fort Monroe. Reuse of Fort Monroe by others is a secondary action resulting from disposal. The Army identified two disposal alternatives consisting of early transfer and traditional disposal, a caretaker status alternative, and the no action alternative required by NEPA. Reuse scenarios are evaluated as secondary actions. These scenarios encompass the community's reuse plan and include higher and lower levels of development intensities. The Army expresses no preference with respect to reuse scenarios. The EIS will analyze each alternative's impact upon the natural and cultural environments in the surrounding vicinity. A map showing the location of the installation is included for your reference.

Army regulations require consideration of state- and federally-listed species in all Army actions. On 20 February 2009, we requested a list of state- and federally-listed threatened, endangered, or candidate species, as well as sensitive species known to occur, or potentially occurring on or in the vicinity of Fort Monroe, VA (please see attached map) from VADEQ and USFWS. No response has been received.

We would appreciate additional information on any other sensitive natural resource that could be impacted by the proposed action. Furthermore, the Army invites comment from your Department on any pertinent conservation measure or concerns involving unique and rare areas/habitats and the species that may occur there.

If your office has any information available on this issue, please send to the following address:

Ms. Holly Bisbee
Marstel-Day, LLC
2217 Princess Anne St. Suite 101-1A
Fredericksburg, VA 22401

2217 Princess Anne Street, Suite 101-1A, Fredericksburg, VA 22401 (540)371-3338

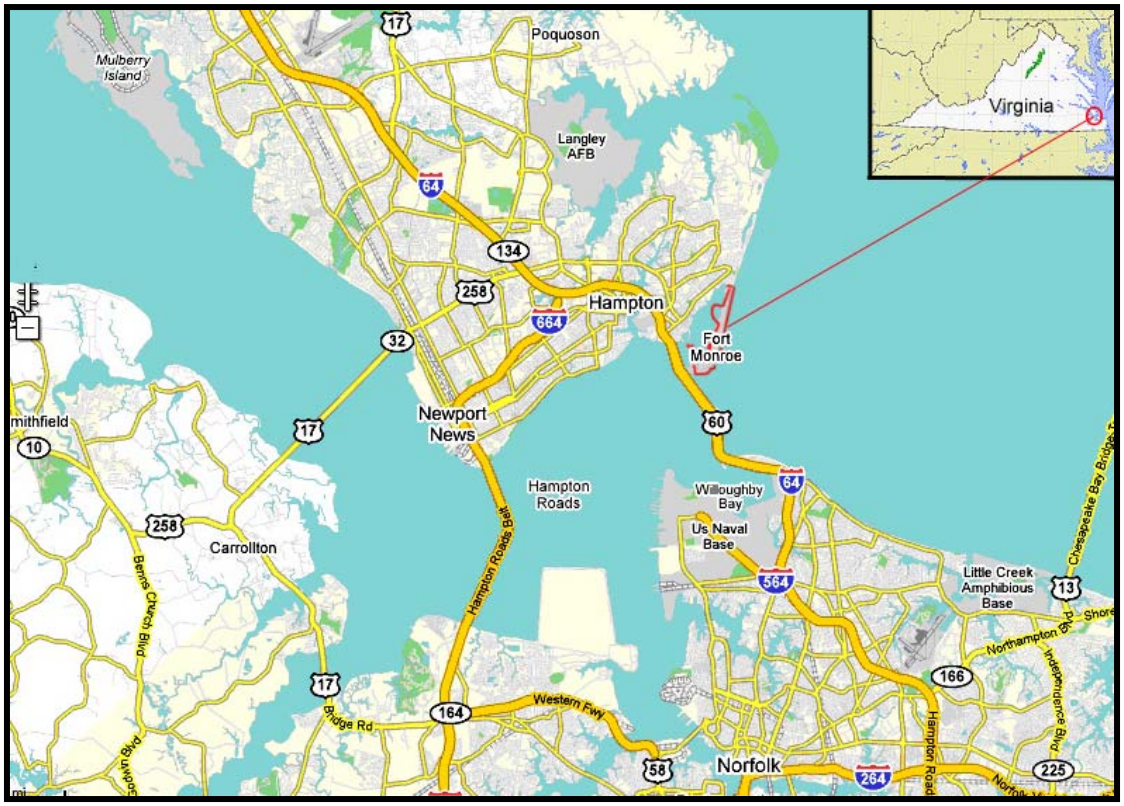
218 North Lee Street, Suite 300, Alexandria, VA 22314 (703)519-3777

1736 Franklin Street, Suite 500, Oakland, CA 94612 (510)663-0936

Thank you in advance for your assistance in this matter. If you have any questions, or require additional information, please contact me at (757)439-8147, or by email at rm@marstel-day.com.

Sincerely,

Rich Muller
Project Manager
Marstel-Day, LLC



Location Map: Fort Monroe and surrounding vicinity

2217 Princess Anne Street, Suite 101-1A, Fredericksburg, VA 22401 (540)371-3338

218 North Lee Street, Suite 300, Alexandria, VA 22314 (703)519-3777

1736 Franklin Street, Suite 500, Oakland, CA 94612 (510)663-0936

APPENDIX F **PROGRAMMATIC AGREEMENT**

This page intentionally left blank.

PROGRAMMATIC AGREEMENT
AMONG
UNITED STATES ARMY
VIRGINIA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION
COMMONWEALTH OF VIRGINIA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
AND
NATIONAL PARK SERVICE
FOR THE
CLOSURE AND DISPOSAL OF FORT MONROE, VA

TABLE OF CONTENTS

WHEREAS CLAUSES **1**

STIPULATIONS **5**

I. THE ARMY SHALL ENSURE PRIOR THE FOLLOWING: 5
- *A. Scope and Limitation of Army Duties and Obligations* *5*
- *B. Continuing Enforcement* *5*
- *C. Environmental Clean-Up* *5*
- *D. Identify Significant Viewsheds* *6*
- *E. Cultural Landscape Study* *7*
- *F. Property Management* *8*
- *G. Mothballed Buildings and Structures* *8*
- *H. Other Measures* *9*

II. THE COMMONWEALTH, THE FMFADA AND CONCURRING PARTIES AGREE THAT THE FOLLOWING PRINCIPLES AND STATEMENTS SHALL INFORM THE MANAGEMENT OF FORT MONROE UPON TRANSFER OF ARMY OWNERSHIP: 11
- *A. Preservation of the NHL Status of Fort Monroe* *11*
- *B. Historic Property Management Zones* *11*
- *C. Public Access* *12*
- *D. Economic Sustainability* *12*
- *E. NPS National Park Initiative* *12*
- *F. Continuing Enforcement* *12*

III. THE FMFADA SHALL ENSURE THE FOLLOWING: 13
- *A. Historic Preservation Manual and Design Standards* *13*
- *B. Interpretive and Educational Programs Plan* *14*

IV. THE COMMONWEALTH SHALL ENSURE THE FOLLOWING: 16
- *A. State Level Memorandum of Understanding* *16*
- *B. Stewardship Commitments* *16*
- *C. Upon Assuming Management of the Property* *16*
  - 1. Treatment of Historic Properties 16
  - 2. Archaeological considerations in the Management Zones 20
  - 3. Demolition of non-contributing buildings and structures 21
  - 4. Mothballed Buildings and Structures 22
  - 5. Sustainable ("green") Preservation, Construction, and Development 22
  - 6. In the event of Sale, Transfer or Lease of Property 22
  - 7. Property Evaluation and Condition Assessments 23
  - 8. Historic Properties Not Included in the BRAC Action 23
- *D. Continuing Review Process* *24*
  - 1. The Commonwealth shall comply with all applicable state and federal environmental and historic preservation laws and regulations. 24
  - 2. Fort Monroe Historic Preservation Officer 24
  - 3. Continuing Involvement of Consulting Parties under the Protocol 26
  - 4. Review of Undertakings at Fort Monroe 26
  - 5. Streamlined Review Process 31

V. ADMINISTRATIVE PROVISIONS: 31
- *A. The Army shall ensure prior to closure the following:* *31*
  - 1. Professional Standards and Qualifications 31
  - 2. Review of Documentation 32
  - 3. Post Review Discoveries 32
  - 4. Dispute Resolution 33
  - 5. Emergency Actions 33
  - 6. Annual Reporting 34
  - 7. Annual Meeting 34
  - 8. Amendment & Termination 35

9. Anti-Deficiency Act 35
10. Duration 35
B. The Commonwealth shall ensure after the transfer of the reversionary land the following: 36
1. Professional Standards and Qualifications 36
2. Review of Documentation 37
3. Post Review Discoveries 37
4. Dispute Resolution 39
5. Emergency Actions 40
6. Annual Reporting 41
7. Annual Meeting 41
8. Amendment & Termination 41
9. Duration 42

CONCURRENT APPROVAL AND SIGNATURE PAGE FOR THE 44

UNITED STATES ARMY 44
VIRGINIA STATE HISTORIC PRESERVATION OFFICER 45
ADVISORY COUNCIL ON HISTORIC PRESERVATION 46
COMMONWEALTH OF VIRGINIA 47
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORTY 48
NATIONAL PARK SERVICE 49
CONCURRING PARTIES 50

APPENDIX A: DEFINITIONS 54

APPENDIX B: FORT MONROE AREA OF POTENTIAL EFFECTS 55

APPENDIX C: FORT MONROE OWNERSHIP STATUS MAP 56

APPENDIX D: THE CONTRIBUTING NON-ARCHAEOLOGICAL ELEMENTS OF THE NATIONAL HISTORIC LANDMARK DISTRICT OF FORT MONROE, VA 57

APPENDIX E: THE 21 NUMBERED LOCI OF ARCHAEOLOGICAL SITE 44HT27 66

APPENDIX F: LIST OF CONSULTING PARTIES 67

APPENDIX G: MANAGEMENT ZONES MAP 68

APPENDIX H: NARRATIVE DESCRIPTION OF MANAGEMENT ZONE BOUNDARIES 69

WHEREAS, the Army proposes the transfer out of Federal ownership of Fort Monroe in accordance with the provisions of the Defense Base Realignment and Closure Act (BRAC) of 1990 (Title XXIX of P.L. 101-510, 10 U.S.C. 2687 note), and is proceeding with the closure of Fort Monroe and consequent disposal of excess and surplus property currently scheduled for completion by the year 2011 in a manner consistent with the recommendations of the 2005 BRAC Commission Report; and

WHEREAS, the Army shall also conduct environmental remediation in compliance with Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); and

WHEREAS, the Army has determined these actions constitute an Undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. Part 470f, and its implementing regulations, 36 CFR Part 800; and

WHEREAS, the terms defined in Appendix A are applicable throughout this document; and

WHEREAS, the Army has initially defined the Undertaking's Area of Potential Effects (APE) as Fort Monroe, which comprises the entire 570 acres of the Old Point Comfort Peninsula located within the City of Hampton, Virginia, as well as those portions of the adjacent communities of Phoebus and Buckroe shown on the map in Appendix B; and

WHEREAS, the current northern boundary of the Fort Monroe National Historic Landmark (NHL) District ends at the seawall, and it has been proposed that the boundary for the Fort Monroe NHL District be expanded to include the full property owned by the Army, the Army shall, for the purposes of this Undertaking, treat the area extending north of the seawall to the northern property line of Fort Monroe abutting the community of Buckroe as contributing to the NHL District; and

WHEREAS, the Commonwealth of Virginia, through Chapter 713, 2004 Acts of Assembly, consented to the lease by the Army of the former Chamberlin Hotel property and agreed that the existence of the lease alone would not cause the property on which the Chamberlin was located to revert to the Commonwealth; and

WHEREAS, Fort Monroe also includes St. Mary Star of the Sea Church and Rectory, buildings owned by the Diocese of Richmond and allowed at Fort Monroe by long-standing agreement of the Army. It is the intention of the parties that these buildings remain on Fort Monroe as they are, subject to the terms and conditions of this Agreement and any other documents delineating the historic rights of the parties; and

WHEREAS, the United States Coast Guard (USCG) owns, maintains, and operates the NRHP-listed Old Point Comfort Lighthouse, which is a separate property that shall remain under the

ownership of the USCG after Fort Monroe is no longer used for national defense purposes, and is not subject to this Agreement; and

WHEREAS, the Army holds a fee simple determinable interest in certain lands comprising a portion of Fort Monroe which shall terminate upon the abandonment of said lands by the Army for their use for any purpose other than fortification and national defense, and the Commonwealth holds reverter rights in those lands; and

WHEREAS, the map of Fort Monroe in Appendix C illustrates the Army's current position regarding the ownership status of lands at such time that Fort Monroe is no longer used for national defense purposes; and the Commonwealth has indicated to the Army that it believes that Parcels 4-1 and 4-2, as shown in Appendix C, also revert to the Commonwealth at such time that Fort Monroe is no longer used for national defense purposes; and

WHEREAS, the reverter rights held by the Commonwealth prevent the Army from unilaterally imposing historic preservation easements or deed restrictions that would survive reversion to the Commonwealth; and

WHEREAS, the Army has consulted with the SHPO as required under Section 106 of the NHPA; and

WHEREAS, the Army has invited the Advisory Council on Historic Preservation (ACHP) to participate in this consultation pursuant to 36 CFR Parts 800.6(a)(1)(i) and 800.14(b), and the ACHP has elected to participate; and

WHEREAS, the Army in consultation with the ACHP, SHPO and other Consulting Parties has determined that the Undertaking meets the criteria of *adverse effect* described in 36 CFR 800.5(a)(1); and

WHEREAS, the Army recognizes that the Undertaking has the potential to affect historic properties, including archaeological properties, that have not yet been identified; and

WHEREAS, the Army in consultation with the SHPO has conducted cultural resource surveys as part of its Section 110 responsibilities, resulting in the identification of one hundred eighty-nine (189) Army-owned contributing elements to the Fort Monroe NHL District including one hundred seventy-five (175) historic buildings, three (3) historic structures, nine (9) historic landscape features, one (1) historic object and the Stone Fort which is made up of eleven (11) named or numbered segments, all of which are listed in Appendix D. Of these elements, four (4), the Chapel of the Centurion, Quarters 1, Quarters 17 (the Lee Quarters), and the Stone Fort, have been determined to be individually eligible for the NRHP, and one hundred twelve (112) buildings have been determined as of the date of signature of this Agreement pursuant to an ongoing identification effort, to have significant interior features, all of which are listed in Appendix D; and

WHEREAS, the Army in consultation with the SHPO has conducted archaeological surveys in accordance with its Section 110 responsibilities, resulting in the identification of one (1) archaeological site, 44HT27, within the Fort Monroe NHL District, and further that Site 44HT27 has twenty-one (21) numbered loci listed in Appendix E, ten (10) of which, and part of an eleventh, are considered eligible for inclusion on the NRHP, five (5) of which, and parts of two (2) other loci, are not eligible, and three (3) of which, and parts of two (2) other loci will require further investigation to determine conclusively their eligibility in terms of the NRHP criteria; and

WHEREAS, the Fort Monroe NHL District also includes thirty-one (31) Wherry Housing units which are subject to *Program Comment for Capehart and Wherry Era Army Family Housing and Associated Structures and Landscape Features (1949-1962)* (Federal Register/Vol. 67, No. 110/Friday, June 7, 2002) (Program Comment) that was approved by the ACHP on May 31, 2002; and

WHEREAS, the parties to this Agreement acknowledge the national importance of Fort Monroe to the history and development of the United States, especially in the fields of military history; African American history, particularly the significance of the Contraband events of 1861 and their continuing importance; Native American history; Civil War history; maritime history; recreational resort history; association with significant individuals; natural resources; engineering and architecture; and

WHEREAS, because the APE for the closure of Fort Monroe includes the Fort Monroe NHL District, the Army has invited the Secretary of the Interior (Secretary) to participate in this consultation pursuant to 36 CFR Part 800.10(c) as an invited signatory, and the National Park Service (NPS) on behalf of the Secretary has elected to participate; and

WHEREAS, the Code of Virginia Section 15.2-6304.1 directed the Fort Monroe Federal Area Development Authority (FMFADA) to request the U.S. Congressional Representative in whose district Fort Monroe is located to seek a reconnaissance survey from the NPS to evaluate whether Fort Monroe should be incorporated as a unit of or be affiliated with the National Park System, and the NPS has issued a report concluding that "it is unlikely that a Special Resources Study would find that it is feasible for the NPS to manage, maintain and operate the full range of resources associated with Fort Monroe" and that "without a strong and sustainable financial partnership with others, a similar finding would result for even those resources constituting the original fortress within the moat." The report further states, "Based on the analysis contained in the reconnaissance study, the NPS recommends that Congress defer consideration of any authorization for a Special Resources Study for Fort Monroe, until such time as the Fort Monroe Reuse Plan is approved by the Department of Defense and the NPS has the opportunity to review the plan and its implementation components and is able to make further recommendations to Congress"; and

WHEREAS, the Army has invited the Commonwealth, as the future property owner of reversionary property, to participate in this consultation as an invited signatory pursuant to 36 CFR Part 800.6(c)(2), and the Commonwealth has elected to participate; and

WHEREAS, the Army has invited the FMFADA, the official Local Redevelopment Authority (LRA) charged under BRAC law with developing a redevelopment plan, to participate in this consultation as an invited signatory pursuant to 36 CFR Part 800.6(c)(2), and the FMFADA has elected to participate; and

WHEREAS, the Army has identified the Catawba Indian Nation, the Shawnee Tribe, and the Absentee-Shawnee Tribe of Indians of Oklahoma, which attach traditional religious and cultural importance to historic properties in the APE, and has invited these tribes to participate in the consultation as Concurring Parties pursuant to 36 CFR Part 800.6(c)(3); and

WHEREAS, the Army has consulted on a government-to-government basis with these tribes and has coordinated consultation on this Undertaking with other provisions of the NHPA; the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. Part 3001 et seq.; the American Indian Religious Freedom Act (AIRFA) as amended, 42 U.S.C. Part 1996 and 1996a; Executive Order 13007, *Indian Sacred Sites* (Federal Register/Vol. 61, No. 104/Wednesday, May 29, 1996); and 36 CFR Part 79, *Curation of Federally-Owned and Administered Archeological Collections*; and

WHEREAS, the Army has invited the City of Hampton (City) to participate in this consultation as a Concurring Party pursuant to 36 CFR Part 800.2(c)(3), and the City has elected to participate; and

WHEREAS, the Army has invited the Virginia Council on Indians (VCI) to participate as a Concurring Party pursuant to 36 CFR Part 800.6(c)(3), and the VCI has elected to participate; and

WHEREAS, the Army has identified and consulted with the individuals and groups listed in Appendix F and has invited them to participate as Concurring Parties pursuant to 36 CFR Part 800.6(c)(3); and

WHEREAS, hereinafter the SHPO, the ACHP, the NPS, the FMFADA, the Commonwealth, and all other parties listed in Appendix F shall be referred to as "Consulting Parties"; and

WHEREAS, the Army is conducting a review process in accordance with the National Environmental Policy Act (NEPA), which includes the solicitation of public input on the potential effects of the closure of Fort Monroe to historic properties; and

WHEREAS, the Army has provided for public participation in the consultation process through a public website and public workshops held on October 30, November 8, November 15, and November 29, 2007, and public workshops held on June 7, June 12 and June 13, 2008; and

WHEREAS, the Parties agree that Stipulations I.F and I.G of this Agreement are sufficient to maintain the historical integrity of the Fort Monroe NHL District in Army ownership such that

the NPS will not be precluded from considering affiliation with all or part of Fort Monroe or use of all or part of Fort Monroe as a National Park; and

NOW, THERFORE, the Signatory Parties (the Army, the SHPO, the ACHP, the NPS, the Commonwealth, and the FMFADA) agree that the Undertaking as described above shall be implemented in accordance with the following stipulations to take into account the effect of this Undertaking on historic properties.

STIPULATIONS

I. The Army shall ensure the following:

A. Scope and Limitation of Army Duties and Obligations

1. The Army's duties and obligations under this Agreement are wholly described within Stipulation I and Subsection V.A. Notwithstanding any other language appearing in this Agreement, no other provision will create any Army duty or obligation, nor confer any rights or reciprocal obligations upon the Army.

2. The Army obligations described in the following Subsections shall be considered mitigations required under the NHPA.

   Subsection B) – Continuing Enforcement
   Subsection C) – Environmental Clean-up
   Subsection D) – Identify Significant Viewsheds
   Subsection E) – Cultural Landscape Study
   Subsection F) – Property Management (excluding Paragraph 4)
   Subsection G) – Mothballed Buildings and Structures
   Subsection H) – Other Measures

3. Army's obligations under this Agreement with respect to the Property or any part thereof are limited to those obligations accruing prior to transfer out of Army ownership.

B. Continuing Enforcement

The Army shall provide historic preservation covenants, easements or other appropriate protections on non-reversionary land in accordance with Stipulation I.F.3 below.

C. Environmental Clean-Up

1. Buildings, Structures, Terrestrial and Underwater Archaeology

i) If the Army determines that a site investigation or remediation will or may have an adverse effect on an eligible or potentially eligible historic property listed in Appendices D or E of this Agreement, or identified subsequent to this Agreement, or an area of high archaeological sensitivity that has not been subject to archaeological inventory efforts, the Army shall develop, in consultation with the SHPO, a plan for its avoidance, protection, or for recovery of information or appropriate documentation. The plan shall comply with the Archaeological Resources Protection Act (ARPA), NHPA and NAGPRA, as appropriate. The Army shall submit the plan to the Signatory Parties for review and comment prior to implementation.

ii) The treatment plan shall consider health and human safety issues when weighing data recovery or other documentation procedures for resources located within or adjacent to hazardous soils, materials or munitions.

2. Cultural Landscape Treatment

i) Prior to the initiation of activities associated with characterization or clean-up of hazardous materials and/or waste, the Army shall determine whether or not the proposed activities have the potential to affect cultural landscapes that contribute to the Fort Monroe NHL District. The Army shall ensure that such a determination is made by a qualified person meeting the professional standards found in 36 CFR Part 61 for the appropriate discipline. These determinations shall be made in consultation with the SHPO before the cultural landscape study required by Stipulation I.E. is finalized. After the cultural landscape study is completed, determinations of effect shall be based on the information in that study.

ii) If the Army determines that the proposed activities have the potential to adversely affect cultural landscapes that contribute to the Fort Monroe NHL District, then the Army shall prepare a landscape treatment plan. The plan shall identify significant landscape features that the activity may affect, provide a narrative description of the activity's scope of work, and an explanation of how the Army will minimize impacts to the cultural landscape, if necessary. The plan shall include appropriate supporting documentation and exhibits such as photography and site plans. The Army shall submit the plan to the Signatory Parties for review and comment prior to implementation.

D. Identify Significant Viewsheds

1. The Army shall, within eighteen (18) months of the execution of this Agreement, submit a final viewshed analysis to the Consulting Parties in order to identify significant viewsheds from and toward the Fort Monroe NHL District.

2. The Army shall develop the viewshed analysis in the following manner:

   i) Provide the Consulting Parties a fifteen (15) calendar day opportunity to provide input on the viewshed analysis methodology. Early in the fifteen (15) calendar day comment period the Army shall conduct a meeting to provide and explain the proposed methodology for the viewshed analysis to the Consulting Parties. The Army shall consider comments received within the fifteen (15) calendar day comment period in developing a methodology for the viewshed analysis.

   ii) The Army shall provide the draft viewshed analysis to the Consulting Parties for review and comment. The Army shall consider comments received within the comment period in preparing the final viewshed analysis.

   iii) The Army shall provide the Signatory Parties copies of the final viewshed analysis and make electronic versions available to the Consulting Parties.

E. Cultural Landscape Study

1. The Army shall, within eighteen (18) months of the execution of this Agreement, submit a final cultural landscape study to the Consulting Parties. The cultural landscape study shall document the evolution of the land form at Fort Monroe from its earliest known occupation to the present. The cultural landscape study shall not only examine the physical changes to Fort Monroe due to man-made and natural forces, but also chronicle past land uses, identify significant landscape features and spatial relationships, and other important aspects of the existing and historic landscape at Fort Monroe.

2. The Army shall develop the cultural landscape study in the following manner:

   i) Provide the Consulting Parties a fifteen (15) calendar day opportunity to provide input on the cultural landscape study methodology. Early in the fifteen (15) calendar day comment period the Army shall conduct a meeting to provide and explain the proposed methodology for the study to the Consulting Parties. The Army shall consider all comments received within the fifteen (15) calendar day comment period in developing a methodology for the study.

   ii) The Army shall provide the draft cultural landscape study to the Consulting Parties for review and comment. The Army shall consider comments received within the comment period in preparing the final study.

   iii) The Army shall provide the Signatory Parties copies of the final cultural landscape study and make electronic versions available to the Consulting Parties.

F. Property Management

1. The Army shall maintain property to the standard established in Chapter 7-Maintenance, Utilities and Services of the "Department of Defense Base Redevelopment & Realignment Manual" (*DoD 4165.66-M, March 1, 2006; http://www.dtic.mil/whs/directives/corres/pdf/416566m.pdf)* until transfer out of Army ownership.

2. The Army shall continue to consult on non-BRAC related undertakings pursuant to 36 CFR Part 800.

3. Prior to the Sale, Transfer or Lease of Non-Reversionary Land, the Army shall:

   i) Develop in consultation with Signatory Parties model historic preservation covenants, easements or other appropriate protections to be attached to the deed or lease agreements.

   ii) Provide draft model covenants, easements or other appropriate protections to Signatory Parties for review and comment.

   iii) Inform potential purchasers of state and federal rehabilitation tax credits and other preservation incentives.

   iv) The Army may be required to negotiate the final text of the covenants, easements, or other appropriate protections with the transferee or lessee. The final text may vary from the text of the draft model covenants, easements, or other appropriate protections provided to the Signatory Parties. The finalized covenants, easements, or other appropriate protections shall be recorded in the City of Hampton conveyance records immediately prior to transfer, or shall be attached to the lease which shall be similarly recorded. In no event shall the Army transfer property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure the long-term preservation of the property's historic significance.

4. The Army shall continue to provide periodic updates on the schedule for vacating buildings to the Commonwealth and the FMFADA.

G. Mothballed Buildings and Structures

1. The Army shall develop a plan to mothball buildings and structures that have been or are to remain vacant for twelve (12) months or longer, or if there is no planned use for them identified, according to the guidance found in *Preservation Brief 31: Mothballing Historic Buildings*, the *Historic Fortification Preservation Handbook* (National Park Service, 2003) and other applicable publications.

2. The Army shall provide the draft mothballing plan to the Signatory Parties for review and comment.

3. The Army shall undertake reasonable measures to preserve unused historic buildings through mothballing in accordance with provisions listed above.

4. Prior to the closure of Fort Monroe the Army shall provide the Commonwealth, the SHPO, and the FMFADA the final mothballing plan.

H. Other Measures

Prior to the closure of Fort Monroe the Army shall ensure that the following measures are carried out:

1. The Army shall revise the Fort Monroe NHL District nomination to more clearly define boundaries of the NHL and to more accurately identify those buildings, structures, objects, archaeological sites, historic viewsheds and landscape features that contribute to the Fort Monroe NHL District. The Army shall submit the final draft nomination to the SHPO for review and concurrence. The Army shall then submit the revised nomination to the NPS for listing.

2. The Army shall complete draft NRHP nominations for those buildings at Fort Monroe identified as individually eligible and submit them to the SHPO for review and concurrence. The Army shall then submit the nominations to the NPS for listing.

3. The Army shall, under the guidance of the Center for Military History (CMH), consider the on-site loan of all or part of the collections pertinent to Fort Monroe's historic significance. Such loan will be limited to an FMFADA, or Commonwealth organization meeting national museum standards, as defined by the American Association of Museums, or an organization sponsored by the FMFADA or Commonwealth meeting national museum standards, that is established or assigned to properly care for the objects. Any such agreement shall be in accordance with Army policies and procedures controlling such agreements. Non-Commonwealth entities must have an executed lease or access agreement with the Commonwealth acceptable to the Army. If the Army, at its sole discretion, determines that no organization meeting the American Association of Museums standards is established and identified to the Army by March 15, 2011, and if an agreement acceptable to the Army, at its sole discretion, is not executed by June 15, 2011, the Army may remove its collections from Fort Monroe. However, nothing in this section will prevent the Army from removing artifacts that are, in its sole discretion, not pertinent to the history of Fort Monroe. If an FMFADA or Commonwealth organization, or an organization sponsored by the FMFADA or Commonwealth, is established after March 15, 2011, or if an agreement is not executed by June 15, 2011, that organization can request the loan of artifacts in accordance with Army regulation 870-20 "Army Museums, Historic Artifacts, and Art".

4. Pursuant to the identification of educational topics and in support of the FMFADA's interpretive and educational programs on the history of Fort Monroe, the Army shall, upon request by the FMFADA, provide copies of specific archival materials (letters, photos, documents, etc.) and information on individual artifacts (accession records, files, notes, etc.) from the Casemate Museum's indexed collection. Copies will be made by the Army's museum personnel within a reasonable period of time following such request, provided that such request is made no later than twelve (12) months after the execution of this Agreement.

5. The Army shall conduct additional archaeological testing within the boundary of Fort Monroe to identify any remnant of the former Freedmen's Cemetery. Prior to conducting the testing involved in such efforts, the Army shall select specific locations where, based upon archival research and past land use, it believes that there is a reasonable expectation that the Freedmen's Cemetery could exist. The Army shall provide documentation supporting its selection of areas to be tested and intended methods to the Consulting Parties for review and comment. Testing shall be suffi**c**ient to determine the full extent of burials if present. If any such remnant of the former Freedmen's Cemetery is identified, the Army shall take appropriate actions to define the site boundaries, commemorate with an appropriate marking, and provide site information to the future property manager. If found, any human remains and associated grave goods shall be preserved in place. The location of any graves identified shall be clearly recorded on future installation maps and planning documents and the boundary of the burial area permanently marked in the field. A report documenting the results of testing in each location shall be prepared and submitted to the SHPO for review and comment. The Army shall provide the Signatory Parties copies of the final report and make copies available to other Consulting Parties upon request.

6. The Army shall, within eighteen (18) months of the execution of this Agreement, establish procedures to make available to the FMFADA and Commonwealth appropriate documents related to historic and other properties on Fort Monroe, such as maintenance records, architectural plans, survey materials and similar documents, to facilitate the proper management of Fort Monroe. The Army, the Commonwealth, the FMFADA and the SHPO shall work together to assess existing records to determine those appropriate for reproduction, the method of transfer for reproduction, and the manner of reproduction. However, for the purpose of this Agreement such appropriate documents are considered available "as is where is."

7. The Army shall provide notice to the FMFADA and the Commonwealth of the future locations of all collections removed from Fort Monroe. The FMFADA and the Commonwealth may request, from the Army, access to such collections in accordance with Army policies and regulations.

II. The Commonwealth, the FMFADA and Concurring Parties agree that the following Principles and Statements shall inform the management of Fort Monroe upon transfer of Army ownership:

A. Preservation of the NHL Status of Fort Monroe

1. The Commonwealth and the FMFADA shall recognize the significant archaeological, architectural, viewshed, and cultural landscape characteristics that contribute to the Fort Monroe NHL District and recognize their stewardship responsibilities to properly consider, identify, maintain, and protect these significant characteristics.

2. The Commonwealth and the FMFADA shall make prudent and feasible efforts to maintain the NHL status for the Fort Monroe NHL District.

3. The Commonwealth and the FMFADA shall reuse to the greatest extent possible historic buildings and structures that contribute to the Fort Monroe NHL District.

4. The Commonwealth and the FMFADA shall consider the direct, cumulative, and indirect effects of their undertakings, not only on specific historic properties at Fort Monroe, but also on historically significant viewsheds and cultural landscapes and on the Fort Monroe NHL District as a whole.

B. Historic Property Management Zones

1. The Management Zones shall serve as the basis for a comprehensive approach for the management and treatment of the diverse and numerous historic, architectural, viewshed, cultural landscape, and archaeological resources at Fort Monroe. The rationale for the Management Zone boundaries is based upon careful consideration of historic and existing architectural character, current and past land uses, construction periods, concentration of contributing resources, and resource types such as the Endicott Batteries and those properties individually eligible for listing on the NRHP.

2. The Management Zones *do not* recommend or suggest any possible future subdivision of Fort Monroe nor are they intended to encourage consideration of each Zone in isolation without acknowledging the implications of future management decisions and treatments on adjacent Zones and Fort Monroe as a whole.

3. Definition of Management Zones

   i) The Management Zones are as follows:
      a) Zone A (West Peninsula)
      b) Zone B (East Peninsula)
      c) Zone C (North Gate Road/Stilwell Drive)
      d) Zone D (McNair, Ingalls, Fenwick Corridors)

e) Zone E (Stone Fort and Moat)
f) Endicott Batteries
g) Individually eligible historic properties

ii) The boundaries of the Management Zones are defined in Appendix G (Map) and Appendix H (Narrative description).

C. Public Access

1. All parties shall recognize the importance that the public has placed on the need for continued public access to the historic and natural amenities at Fort Monroe.

2. The Commonwealth and the FMFADA shall maintain and enhance public access to Fort Monroe's historic, natural, and recreational attractions to the greatest extent possible.

D. Economic Sustainability

1. All parties shall recognize that economic sustainability is essential to ensuring the continued and future preservation of historic properties at Fort Monroe.

2. The Commonwealth and the FMFADA shall endeavor to create a sustainable, steady, and diverse revenue stream at Fort Monroe that is in keeping with the principles expressed in Stipulation II.A above.

E. NPS National Park Initiative

1. The Commonwealth and the FMFADA shall take no actions that may preclude the use of Fort Monroe as a National Park, in whole or in part, or entering into an affiliated partnership with the NPS at Fort Monroe until such time that the Commonwealth and the FMFADA have consulted with the NPS and have evaluated such opportunities.

2. The NPS shall be responsible for its own compliance with Section 106 and Section 110 of the National Historic Preservation Act.

F. Continuing Enforcement

In the event of a transfer of any interest in the real estate or delegation of their interest in, or respective responsibilities for, Fort Monroe, the Commonwealth and the FMFADA shall bind the transferee or the delegatee to the terms of this Agreement as appropriate through available legally enforceable mechanisms.

III. The FMFADA shall ensure the following:

A. Historic Preservation Manual and Design Standards

1. Prior to closure and the Commonwealth assuming responsibility for the Reversionary Land, the FMFADA shall develop a Historic Preservation Manual and Design Standards (Design Standards) for activities occurring on the reversionary and non-reversionary land at Fort Monroe.

2. The Design Standards shall be based upon and consistent with sound and accepted preservation practices and standards as established and revised in relevant NPS publications and guidance documents, such as its Preservation Briefs and Preservation Tech Notes series, and other appropriate source materials including, for example, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (National Park Service 1996), *Preservation Bulletin 36: Protecting Cultural Landscapes: Planning, Treatment, and Management of Historic Landscapes*, and *Historic Fortification Preservation Handbook* (National Park Service, NPS 2003). The Design Standards shall be consistent with the property management and treatment of historic property requirements found in Stipulation IV.C. The Design Standards shall, at a minimum, address the following:

   i) The array of treatment options (rehabilitation, restoration, reconstruction, preservation) for existing historic buildings, structures, objects, and landscapes.

   ii) Routine maintenance and repair activities.

   iii) Appropriate design, massing, height, scale, materials, location, spatial relationships, density, etc. for new construction and additions to existing buildings or structures within each Management Zone.

   iv) Significant historic viewsheds and cultural landscapes identified by the Army pursuant to Stipulation I.D. and I.E. above.

   v) Potential to affect archaeological sites resulting from proposed ground disturbing activities.

3. The FMFADA shall post preliminary drafts of the Design Standards on its website to solicit public comment. The FMFADA shall consider the comments of the public as it revises the Design Standards.

4. The FMFADA shall provide a draft of the Design Standards, and any public comments received on the draft Design Standards, to the Consulting Parties for review and comment within eighteen (18) months of the execution of this Agreement.

The FMFADA shall consider the comments of the Consulting Parties as it develops the final Design Standards.

5. The FMFADA shall provide a final draft of the Design Standards to the SHPO and the NPS for review and approval.

6. The FMFADA shall ensure that a copy of the final Design Standards is provided to the Signatory Parties and that the Design Standards are posted on its website within twenty four (24) months of execution of this Agreement. The final Design Standards shall be used by the Commonwealth to carry out its management responsibilities established in Stipulation IV below.

7. Amendment to the Final Design Standards:

   i) Recommendations for amendment to the Design Standards may be made through written request to the FMFADA.

   ii) The FMFADA, the Commonwealth, and the SHPO shall consult on the need for amendment and shall seek the technical assistance from the NPS.

   iii) The FMFADA, the Commonwealth, and the SHPO shall take into account any technical assistance from the NPS in making a decision to amend the Design Standards.

   iv) The proposed response to the request for amendment shall be posted for public comment on the FMFADA website for a period of thirty (30) calendar days.

   v) The SHPO shall have approval authority over any proposed amendment to the Design Standards. Upon SHPO approval, the amended Design Standards shall be posted on the FMFADA website.

B. Interpretive and Educational Programs Plan

1. Prior to closure and the Commonwealth assuming responsibility for the Reversionary Land, the FMFADA shall develop a plan for interpretive and educational programs on the reversionary and non-reversionary land at Fort Monroe. The intent of the plan is to inform future interpretive and educational activities at Fort Monroe.

2. Within three (3) months of the execution of this Agreement, the FMFADA shall develop in consultation with the Army topics for the Interpretive and Educational Programs Plan. The Interpretive and Educational Programs Plan shall address the entire history of human occupation at Fort Monroe and, at a minimum, shall include, but not be limited to, the following:

i) Natural history and resources

ii) Native American occupation

iii) Colonial settlement and occupation

iv) Military history of the site and its environs, with emphasis on Fort Monroe's strategic importance to coastal defense, training, the Civil War period, Army command headquarters located there, etc.

v) African American history with emphasis on the significance of the Contraband Order of 1861

vi) Individuals of national significance associated with Fort Monroe

vii) History as a resort

viii) Maritime history with emphasis on exploration and commercial port activities

ix) Architectural, archaeological, and cultural landscape elements of outstanding quality, important historic or pre-historic associations or uniqueness

3. The FMFADA shall provide a draft of the Interpretive and Educational Programs Plan to the Signatory Parties, the VCI, identified federally-recognized tribes, and other Consulting Parties for review and comment within twenty-four (24) months of the execution of this Agreement. The FMFADA shall take into account all timely comments provided in developing the final Interpretive and Educational Programs Plan.

4. The FMFADA shall ensure that a copy of the final Interpretive and Educational Programs Plan is provided to the Signatory Parties, the VCI, identified federally-recognized tribes, and other Consulting Parties. The FMFADA shall also make the final Interpretive and Educational Programs Plan available to the public via its website.

5. The FMFADA shall notify and request comments from the Signatory Parties, the VCI, identified federally-recognized tribes, and other Consulting Parties of proposed revisions and amendments to the Interpretive and Educational Programs Plan.

IV. The Commonwealth shall ensure the following:

A. State Level Memorandum of Understanding

Due to the nature of the Undertaking, and to ensure the long term management of Fort Monroe consistent with the terms of this Agreement, the Commonwealth, the SHPO, and the FMFADA shall enter into a state-level Memorandum of Understanding (MOU) within twelve (12) months of execution of this Agreement that shall include Stipulation II, Stipulation III.A, Stipulations IV.B through IV.D, and Stipulation V.B as written below.

B. Stewardship Commitments

1. The Commonwealth reaffirms its commitment to the principles expressed in Stipulation II.

2. The Commonwealth shall ensure that the property shall be managed in accordance with the treatments specified for the designated Management Zones established in Stipulation IV.C.1 below, and the final Design Standards developed pursuant to Stipulation III.A above.

3. The Commonwealth shall take all prudent and feasible actions to preserve and protect the historic properties at Fort Monroe and the Fort Monroe NHL District as a whole.

4. The Commonwealth shall not cause an adverse effect to the Fort Monroe NHL District, or any of its contributing historic, architectural, archaeological, viewshed or cultural landscape elements, unless after a full consideration of alternatives and consultation pursuant to Stipulation IV.D.4, it is determined that the adverse effect cannot be avoided.

C. Upon Assuming Management of the Property

1. Treatment of Historic Properties

   i) Zone A (West Peninsula)
      a) New construction shall be minimized in order to maintain the current and historic character of Zone A as an area of little permanent development and a more natural setting.
      b) New construction shall be in accordance with established Design Standards and implemented only after consultation pursuant to Stipulation IV.D.4 below.
      c) Demolition of a contributing property to the Fort Monroe NHL District shall not occur until after a full consideration of reuse alternatives, documentation of reuse alternatives, and justification of the reason(s) why they are not prudent and feasible, and presentation of economic data to support the

proposal to demolish the historic property are completed and provided by the project proponent. The Commonwealth shall consult on such undertakings pursuant to Stipulation IV.D.4 below.

d) All restoration, preservation, rehabilitation or reconstruction (if appropriate due to loss of a historic property) shall be done according to the Design Standards.

ii) Zone B (East Peninsula)

a) The Commonwealth shall fully consider reuse alternatives that maintain the existing housing, cultural landscape features, and circulation patterns prior to demolishing Wherry Housing consistent with the provisions of the Program Comment. The Commonwealth shall consider the use of historic federal and state rehabilitation tax credits and other preservation incentives in its decision-making process.

b) New construction outside of the Wherry Housing area, but still within Zone B, shall, to the greatest extent practicable, be constructed within the same general geographic area of disturbance as previous development, and maintain no more than the same two to three-story height found in the contributing historic buildings in Zone B and in accordance with the Design Standards. New construction shall occur only after consultation pursuant to Stipulation IV.D.4 below.

c) The Commonwealth shall provide the SHPO supporting materials that document the Commonwealth's full consideration of reuse alternatives that maintain the existing Wherry Housing.

d) After full consideration of reuse alternatives and the comments provided by the SHPO, the FMFADA, and any other comments received pursuant to the protocol established in Stipulation IV.D.2.iii)g) below, the Commonwealth may demolish Wherry Housing.

e) If any new construction is proposed in the Wherry Housing area, any new construction shall, to the greatest extent practicable, be constructed within the same general geographic area of ground disturbance as previous development, and maintain no more than the same two to three-story height found in the contributing historic buildings of the Wherry Housing area and in accordance with the Design Standards. New construction shall occur only after consultation pursuant to Stipulation IV.D.4 below.

f) If new construction is proposed in the Wherry Housing area, to the greatest extent practicable, existing cultural landscape features and circulation patterns shall be maintained.

g) All restoration, preservation, rehabilitation or reconstruction (if appropriate due to loss of a historic property) shall be done according to the Design Standards.

iii) Zone C (North Gate/Stilwell Drive)

a) Demolition of a contributing property to the Fort Monroe NHL District shall not occur until after a full consideration of reuse alternatives, documentation of reuse alternatives, and justification of the reason(s) why they are not prudent and feasible, and presentation of economic data to support the proposal to demolish the historic property are completed and provided by the project proponent. The Commonwealth shall consult on such undertakings pursuant to Stipulation IV.D.4 below.
b) New infill construction shall be in accordance with established Design Standards and implemented only after consultation pursuant to Stipulation IV.D.4 below.
c) All restoration, preservation, rehabilitation or reconstruction (if appropriate due to loss of a historic property) shall be done according to the Design Standards.

iv) Zone D (McNair, Ingalls, Fenwick Corridor)
a) Demolition of a contributing property to the Fort Monroe NHL District shall not occur until after a full consideration of reuse alternatives, documentation of reuse alternatives, and justification of the reason(s) why they are not prudent and feasible, and presentation of economic data to support the proposal to demolish the historic property are completed and provided by the project proponent. The Commonwealth shall consult on such undertakings pursuant to Stipulation IV.D.4 below.
b) Only limited new infill construction for the replacement of pre-existing buildings/structures in accordance with the Design Standards shall occur and only after consultation pursuant to Stipulation IV.D.4 below. Any proposed replacement of a building or structure shall have documented historic precedent and be compatible with the existing architectural character of the Management Zone.
1) Notwithstanding the foregoing, this Agreement recognizes the validity of the pre-existing Programmatic Agreement among the Army, the SHPO, and OPC Hampton, LLC, which includes the establishment and construction of a future parking facility for the former Chamberlin Hotel.
2) Continued consultation among OPC Hampton, LLC, the SHPO, and the NPS regarding the parking facility for the former Chamberlin Hotel shall proceed according to existing authorities and protocols provided, however, the construction of the parking facility shall be subject to the Design Standards with respect to design, massing, scale, height, and materials.
c) All restoration, preservation, rehabilitation or reconstruction (if appropriate due to loss of a historic property) shall be done according to the Design Standards.

v) Zone E (Stone Fort and Moat)
a) No demolition of a contributing property to the Fort Monroe NHL District shall occur unless necessary to address immediate health and safety concerns

or to prevent further property damage, and only after consultation pursuant to Stipulation IV.D.4 below.

1) If the Commonwealth determines that demolition is necessary and appropriate, only that amount of historic fabric and materials needed to ensure adequate protection of life and property shall be removed.
2) Existing historic materials and features, such as bricks, windows, mantels, sills, lintels, etc. shall be salvaged to the greatest extent practicable and safely stored for reuse in the reconstruction of the property or to replace deteriorated or damaged historic materials and features in other contributing properties at Fort Monroe.
3) The Commonwealth shall undertake adequate protections to stabilize, secure, and preserve the remaining extant portions of the historic property from further damage.

b) No new infill construction shall occur unless to reconstruct documented missing historic properties or landscapes and only after consultation pursuant to Stipulation IV.D.4 below. New infill construction shall have documented historic precedent and be compatible with the existing architectural character of the Management Zone.

c) All restoration, preservation, rehabilitation or reconstruction (if appropriate due to loss of a historic property) shall be done according to the Design Standards.

d) Reuse of historic properties shall occur in a sensitive and appropriate manner that corresponds with their historic use or a new use that requires minimal change to their distinctive materials, features, spaces, and spatial relationships.

vi) Endicott Batteries

a) No demolition shall occur unless necessary to address immediate health and safety concerns or to prevent further property damage, and only after consultation pursuant to Stipulation IV.D.4 below.

1) If the Commonwealth determines that demolition is necessary and appropriate, only that amount of historic fabric and materials needed to ensure adequate protection of life and property shall be removed.
2) Existing historic materials and features, such as gun mounts, windows, mantels, sills, lintels, etc. shall be salvaged to the greatest extent practicable and safely stored for reuse in the reconstruction of the property or to replace deteriorated or damaged historic materials and features in other contributing properties at Fort Monroe.
3) The Commonwealth shall undertake adequate protections to stabilize, secure, and preserve the remaining extant portions of the historic property from further damage.

b) All restoration, preservation, rehabilitation or reconstruction (if appropriate due to loss of a historic property) shall be done according to the Design Standards.

vii) Individually Eligible Historic Properties

a) No demolition shall occur unless necessary to address immediate health and safety concerns or to prevent further property damage, and only after consultation pursuant to Stipulation IV.D.4 below.

1) If the Commonwealth determines that demolition is necessary and appropriate, only that amount of historic fabric and materials needed to ensure adequate protection of life and property shall be removed.

2) Existing historic materials and features, such as bricks, windows, mantels, sills, lintels, etc. shall be salvaged to the greatest extent practicable and safely stored for reuse in the reconstruction of the property or to replace deteriorated or damaged historic materials and features in other contributing properties at Fort Monroe.

3) The Commonwealth shall undertake adequate protections to stabilize, secure, and preserve the remaining extant portions of the historic property from further damage.

b) All restoration, preservation, rehabilitation or reconstruction (if appropriate due to loss of a historic property) shall be done according to the Design Standards.

2. Archaeological considerations in the Management Zones

The process outlined herein shall be applicable for all Management Zones described in Stipulation IV.C.1.i) through vii) above.

i) If the Commonwealth determines, in consultation with the SHPO, that further efforts are needed to identify archaeological sites, the Commonwealth shall ensure that an archaeological testing program is developed in consultation with the SHPO and after considering any other comments received pursuant to the protocol established in Stipulation IV.D.2.iii)g) below. Prior to affecting any potentially eligible archaeological site, the Commonwealth shall develop a testing program of sufficient intensity to provide an evaluation of eligibility for the NRHP by the Commonwealth in consultation with the SHPO, following the regulations outlined in 36 CFR Part 63.

ii) If, as a result of the testing program, archaeological sites are identified that are eligible for the NRHP, the Commonwealth shall develop a plan for their avoidance, protection, or recovery of information, in consultation with the SHPO and after considering any other comments received pursuant to the protocol established in Stipulation IV.D.2.iii)g) below. The plan shall be submitted to the SHPO for review and approval prior to implementation.

iii) The treatment plan shall evaluate the full range of treatment options for a resource (avoidance shall be the preferred treatment). Following approval by the SHPO, the treatment plan shall be implemented by a qualified archaeologist.

iv) All data recovery plans prepared under the terms of this Agreement shall include the following elements:
   a) Information on the archaeological property or properties where data recovery is to be carried out and the context in which such properties are eligible for the NRHP;
   b) Information on any property, properties, or portions of properties that will be destroyed without data recovery;
   c) Discussion of the research questions to be addressed through the data recovery with an explanation/justification of their relevance and importance;
   d) Description of the recovery methods to be used, with an explanation of their pertinence to the research questions;
   e) Information on arrangements for any regular progress reports or meetings to keep the SHPO up to date on the course of the work. The plan should contain the expected timetable for excavation, analysis and preparation of the final report;
   f) Proposed methods for disseminating results for the work to the interested public; and
   g) Proposed methods by which other parties, if applicable, shall be kept informed of the work, and if human remains and/or grave goods are expected to be encountered, information on consultation with the appropriate federally recognized tribes and the VCI regarding final disposition of the human remains and/or grave goods.

3. Demolition of non-contributing buildings and structures

   i) The Commonwealth shall consult with the SHPO as outlined in Stipulation IV.C.2 above to assess whether ground disturbing activities associated with demolition may affect recorded archaeological sites or archaeologically sensitive areas.

   ii) If the Commonwealth determines that no archaeological resources will be affected by the proposed demolition, the Commonwealth may demolish without further review those buildings and structures identified as non-contributing properties to the Fort Monroe NHL District.

   iii) If the Commonwealth determines that the demolition of non-contributing buildings or structures may affect recorded archaeological sites or archaeologically sensitive areas, the Commonwealth shall follow the procedure outlined in Stipulation IV.C.2 above.

   iv) The Commonwealth shall report demolitions of non-contributing buildings or structures to the SHPO and the FMFADA annually pursuant to Stipulation V.B.6 below.

4. Mothballed Buildings and Structures

   i) The Commonwealth shall adopt the plan and procedures for mothballing buildings and structures developed by the Army in Stipulation I.G above and implement it for those properties the Army had not been able to mothball prior to closure, and for future vacant properties under the ownership, management or control of the Commonwealth.

   ii) The Commonwealth shall undertake all prudent and feasible efforts to preserve historic buildings through mothballing if they have been or are to remain vacant for twelve (12) months or longer, or if there is no planned use for them identified.

5. Sustainable ("green") Preservation, Construction, and Development

   The Commonwealth shall use sustainable ("green") techniques, materials, and principles in the rehabilitation, restoration or preservation of historic properties in a manner that is consistent with the Design Standards.

6. In the event of Sale, Transfer or Lease of Property

   i) The Commonwealth shall develop in consultation with the SHPO and the FMFADA, criteria that shall guide the decision-making process for the sale, transfer or lease of historic properties at Fort Monroe. The criteria shall include at a minimum the following:
      a) An economic analysis comparing retention of the historic property under Commonwealth ownership and control VS. the sale, transfer or lease of the historic property to another entity.
      b) Anticipated effects to the characteristics that make the historic property eligible for the NRHP either as a contributing resource in the Fort Monroe NHL District or individually.
      c) Significance of the historic property.
      d) Physical condition of the historic property, to include its historic integrity.
      e) Evaluation of the feasibility and practicality of mothballing the historic property until a future use is identified.

   ii) The Commonwealth shall develop in consultation with the SHPO historic preservation covenants, easements or other appropriate protections to be attached to the deed or lease agreements. Such protections shall be consistent with the principles established in Stipulation II above.

   iii) The Commonwealth shall provide the language of draft preservation covenants, easements or other appropriate protections to the SHPO and the FMFADA for review and comment.

iv) The Commonwealth shall consult with the signatories of the state level MOU to determine if amendment of the MOU is necessary.

v) The Commonwealth shall encourage use of state and federal rehabilitation tax credits and other preservation incentives.

vi) If the property is to be transferred to any party not bound by the state-level MOU, the Commonwealth shall take such necessary steps to ensure that the protections afforded by the state-level MOU are enforceable against such party by the Commonwealth, the FMFADA, the City of Hampton, or such entity as may have jurisdiction over the property at the time through local zoning and/or other appropriate tools.

7. Property Evaluation and Condition Assessments

i) Evaluation of Properties to the NRHP
   a) The Commonwealth shall, in consultation with the SHPO and the FMFADA, develop a plan to conduct regularly scheduled evaluations of properties at Fort Monroe in order to determine if properties previously determined not individually eligible or non-contributing to the Fort Monroe NHL District due to age, condition, alteration, etc. have become eligible for the NRHP.
   b) The Commonwealth shall report to the SHPO and the FMFADA on its eligibility recommendations in a format stipulated in the evaluation plan, and request concurrence from the SHPO and comment from the FMFADA.
   c) If the Commonwealth and the SHPO do not agree on the eligibility recommendation, the Commonwealth shall request the opinion of the Keeper of the NRHP pursuant to 36 CFR Part 63.

ii) Condition Assessments of Historic Properties
   a) The Commonwealth shall, in consultation with the SHPO and the FMFADA, develop a plan to conduct regularly scheduled inspections to assess the conditions of historic properties at Fort Monroe.
   b) The plan shall include, at a minimum, criteria for assessing the condition of historic properties, schedule for property inspections, methods for reporting the findings to the SHPO and the FMFADA and recommendations for corrective actions if necessary.

8. Historic Properties Not Included in the BRAC Action

i) Nothing in this Agreement impacts or alters the USCG's Section 106 responsibilities for its undertakings involving the Old Point Comfort Lighthouse, a property listed on the NRHP pursuant to 36 CFR Part 800.

ii) The Commonwealth shall include as terms of future ground leases for those historic properties at Fort Monroe that are currently in private ownership or control, specifically St Mary's Star of the Sea Church and Rectory and the former Chamberlin Hotel, that any proposed exterior changes, alterations, additions or demolitions to these historic properties shall be subject to review and comment pursuant to the process described in Stipulation IV.D.4 below.

D. Continuing Review Process

1. The Commonwealth shall comply with all applicable state and federal environmental and historic preservation laws and regulations.

2. Fort Monroe Historic Preservation Officer

   i) The Commonwealth shall create and maintain the state position of Fort Monroe Historic Preservation Officer (FMHPO) within twelve (12) months of execution of this Agreement. In the event that the Commonwealth no longer maintains management, control or ownership of the property, the state-level MOU in Stipulation IV.A above shall be amended in order to re-establish the position of FMHPO.

   ii) The FMHPO shall meet the NPS *Professional Qualification Standards* for architectural historian or historic architect.

   iii) The duties of the FMHPO shall include, but not be limited to, the following:
      a) Function as the historic preservation expert at Fort Monroe for the Commonwealth.
      b) Review of proposed undertakings at Fort Monroe in order to evaluate effects to historic properties.
      c) Act as the liaison between the Commonwealth and project proponents and advise on undertakings affecting historic properties.
      d) Act as the liaison between the Commonwealth and the public concerning historic preservation issues at Fort Monroe.
      e) Coordinate project reviews with the SHPO and the FMFADA.
      f) Coordinate public notification and stakeholder involvement in undertakings occurring at Fort Monroe covered under the "Continuing Review Process" in Stipulation IV.D.4 below.
      g) Develop a public notification and stakeholder involvement protocol.
         1) A public notification and stakeholder involvement protocol (protocol) shall be developed in consultation with the SHPO, the FMFADA, and other Consulting Parties to this Agreement identified in Appendix F within eighteen (18) months of execution of Agreement.
         2) During consultation on the protocol, a consulting party may request that a Signatory file a written objection with the Secretary of Administration

concerning the development of the protocol. If a Signatory files such an objection, the Secretary of Administration shall consider it and attempt to resolve it. If the Secretary of Administration and the Signatory cannot resolve the objection, the Secretary of Administration shall refer the matter to the ACHP for advice on resolving the objection. The ACHP will have fifteen (15) days from receipt of the referral to provide advice. The Secretary of Administration will consider any timely comment provided by the ACHP before making a final decision on how to resolve the objection. The Secretary of Administration will notify the objecting consulting party and the Signatories as to the final decision.

3) The protocol shall incorporate the following principles and practices:
   - (i) Be in a manner that reflects the nature and complexity of the proposed undertakings, on the potential for undertakings to affect historic properties, and the likely interest of the public and stakeholders.
   - (ii) Provide the public and stakeholders with access to full, accurate and timely information regarding undertakings at Fort Monroe and include a clear definition of proposed undertakings and their potential to affect historic properties.
   - (iii) Provide opportunities for meaningful and timely review and comment by members of the public and involvement of those groups and individuals with a special demonstrated interest in Fort Monroe. The Commonwealth shall take into consideration any comments received from the public and stakeholders in its decision-making process.
   - (iv) Methods for notification and participation may utilize existing procedures used by the Commonwealth and the FMFADA, and may include electronic means, websites or other cost-effective methods provided these are consistent with the terms and intent of this Agreement.
   - (v) The protocol shall address confidentiality concerns of private individuals and businesses, location of archaeological sites, and other potential issues.
   - (vi) Stakeholder involvement shall be at appropriate stages such as identification and evaluation of historic properties, effect findings, and resolution of adverse effects.
   - (vii) The public notification and stakeholder involvement protocol shall be submitted to the Secretary of the Administration for approval prior to its implementation.
   - (viii) The public notification and stakeholder involvement protocol shall become effective on the day the Commonwealth assumes legal control or ownership of all or a portion of Fort Monroe.
   - (ix) Any amendments to the protocol shall be made pursuant to Stipulation V.B.8 of this Agreement.

3. Continuing Involvement of Consulting Parties under the Protocol

   i) The FMHPO shall communicate in writing with the Consulting Parties to this Agreement, as identified in Appendix F, of the approval of the public notification and stakeholder involvement protocol. The Consulting Parties shall then have three (3) months to inform the FMHPO in writing if they wish to be considered a stakeholder under the terms of the protocol developed pursuant to Stipulation IV.D.2.iii)g) above.

   ii) The FMHPO shall consider all requests from Consulting Parties to this Agreement for stakeholder status, and such requests shall not be unreasonably denied.

   iii) If a Consulting Party to this Agreement does not notify the FMHPO of its interest in becoming a stakeholder, the FMHPO may assume that the Consulting Party has chosen not to participate further or will participate as a member of the public.

4. Review of Undertakings at Fort Monroe

   i) Public notification and stakeholder involvement in the continuing review of undertakings at Fort Monroe as outlined in this section shall be determined by the protocol developed in Stipulation IV.D.2.iii)g) above.

   ii) The FMHPO shall determine whether a proposed undertaking at Fort Monroe has the potential to affect historic properties. If the FMHPO determines that the undertaking does not have the potential to affect historic properties, then no further action is necessary pursuant to this section.

   iii) If after considering a preliminary APE for the undertaking using the principles described in Stipulation IV.D.4.iv)a) below, the FMHPO determines that the nature of the undertaking has the potential to affect historic properties, but the FMHPO determines that either there are no historic properties present or there are historic properties present but the undertaking will have no effect upon them, the FMHPO shall:
      a) Notify the project proponent to proceed with the undertaking and to inform the FMHPO if the scope of work changes.
      b) Document the decision that no historic properties are present or that no historic properties were affected by the undertaking.
      c) All undertakings receiving a no historic properties present/no historic properties affected determination will be reported quarterly to the SHPO.
      d) If the SHPO determines that the FMHPO has incorrectly or inappropriately determined that there are no historic properties present or no historic properties are affected by undertakings, the SHPO may require the FMHPO to submit all undertakings the FMHPO determines are no historic properties

present/no historic properties affected for the concurrence of the SHPO. After a period, and at its discretion, the SHPO may reinstate the process described in Stipulation IV.D.4.iii)a) through c) above.

iv) If after considering a preliminary APE for the undertaking using the principles described in Stipulation IV.D.4.iv)a) below, the FMHPO determines that the proposed undertaking has the potential to affect historic properties by altering directly or indirectly any of the characteristics that qualify them for inclusion in the NRHP, the FMHPO shall, in consultation with the SHPO and the FMFADA, define the APE for the undertaking in the following manner:
   a) The APE shall encompass the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if such exist.
   b) The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects (e.g., direct and indirect).

v) Once the APE is defined, the FMHPO shall identify, in consultation with the SHPO and the FMFADA, historic properties located within the APE.
   a) The FMHPO shall review existing information on historic properties within the APE, including any data on historic properties that may not already be identified.
   b) The FMHPO shall seek information, as appropriate, from individuals and organizations likely to have knowledge of, or concerns with, historic properties in the area and identify issues relating to the undertaking's potential effects to historic properties.
   c) Based on the information gathered pursuant to this section of the Agreement, the FMHPO shall apply the NRHP criteria to determine if a previously unevaluated property within the APE is eligible for listing on the NRHP.

vi) The FMHPO shall, in consultation with the SHPO and the FMFADA, apply the following criteria of adverse effect to historic properties listed in or eligible for the NRHP located within the APE:
   a) An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify it for inclusion in the NRHP in a manner that would diminish the integrity of a property's location, design, setting, materials, workmanship, feeling or association.
      1) Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation for the NRHP.
      2) Adverse effects may also include reasonably foreseeable effects caused by undertakings that may occur later in time, be farther removed in distance, or be cumulative.
   b) Adverse effects include, but are not limited to:

1) Physical destruction of all or a part of the property.
2) Alteration of a property including restoration, rehabilitation, repair, maintenance, stabilization, hazardous materials remediation and provision of handicapped access, that is not consistent with the Design Standards.
3) Removal of the property from its historic location.
4) Change in character of the property's use or of physical features within the property's setting that contribute to its historic significance.
5) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features.
6) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property.
7) Transfer, lease, or sale of a property out of Commonwealth ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

c) The FMHPO shall consider any views concerning such effects which have been provided by the SHPO, the FMFADA, and members of the public or stakeholders pursuant to the protocol developed in Stipulation IV.D.2.iii)g) above.

vii) If the FMHPO determines that the proposed undertaking will have no adverse effect to historic properties, the FMHPO shall notify the SHPO and the FMFADA and request their review and comment on the finding.

viii) If the SHPO agrees with the finding and the FMFADA has not objected in writing, the FMHPO may recommend to the project proponent that the undertaking proceed.

ix) If the FMHPO and the SHPO fail to agree, or if the FMFADA objects in writing, the FMHPO shall consult with the objecting party to resolve the disagreement in the following manner:

a) Disagreement with the FMFADA
1) The FMHPO shall notify the SHPO of the objection, and make a good faith effort to resolve the disagreement with the FMFADA.
2) The FMHPO may request technical assistance from the ACHP and/or the NPS in resolving the objection.
3) The FMHPO shall take into account the comments of the SHPO and any other comments received pursuant to the protocol established in Stipulation IV.D.2.iii)g) above, and any technical assistance provided by the ACHP and/or the NPS, in making a final decision as to the effect of the undertaking. The FMHPO shall provide the SHPO and the FMFADA a written summary of the final decision that contains the justification for the decision and evidence of consideration of the opinions of the FMFADA and the SHPO, the public, any stakeholders, and the ACHP and/or NPS if applicable.

b) Disagreement with the SHPO
   1) The FMHPO shall notify the FMFADA of the objection and make a good faith effort to resolve the disagreement with the SHPO.
   2) The SHPO shall request technical assistance from the ACHP and/or the NPS, and shall forward any comments received from the ACHP and/or the NPS to the FMHPO and the Secretary of Administration. The FMHPO shall forward all project information, to include all comments received from the SHPO, the FMFADA, and any other comments received pursuant to the protocol established in Stipulation IV.D.2.iii)g) above, to the Secretary of Administration and request the Secretary to determine if the undertaking may proceed as designed, may proceed with modifications, may not proceed or if further consultation between the FMHPO and the SHPO to resolve the objection is necessary. The Secretary shall consider any comments of the ACHP, the NPS, and any comments received from the public and any stakeholders in making a final decision. The FMHPO shall notify the SHPO and the FMFADA of the Secretary's decision and provide evidence of the consideration of the views of the ACHP, the NPS, the public, and/or any stakeholders.

x) If the proposed undertaking has the potential to adversely affect historic properties, the FMHPO shall resolve the adverse effect in the following manner:
   a) The FMHPO, in consultation with the SHPO, the FMFADA, and appropriate stakeholders identified pursuant to the stakeholder involvement protocol developed in Stipulation IV.D.2.iii)g) above, shall work with the project proponent to modify the proposed undertaking in a manner that will attempt to avoid or minimize the adverse effect.
   b) If the FMHPO believes that the modifications to the project would result in historic properties no longer being adversely affected, the FMHPO shall provide the SHPO and the FMFADA the revised project plans and request their review and comment.
      1) If the SHPO agrees with the finding and the FMFADA has not objected in writing, the FMHPO may recommend to the project proponent that the undertaking proceed.
      2) If the FMHPO and the SHPO fail to agree, or if the FMFADA objects in writing, the FMHPO shall consult with the objecting party in the following manner:
         (i) Disagreement with the FMFADA
            (a) The FMHPO shall notify the SHPO of the objection, and make a good faith effort to resolve the disagreement with the FMFADA.
            (b) The FMHPO may request technical assistance from the ACHP and/or the NPS in resolving the objection.
            (c) The FMHPO shall take into account the comments of the SHPO, any technical assistance provided by the ACHP and/or the NPS, and any comments received from the public or any stakeholders

pursuant to the protocol established in Stipulation IV.D.2.iii)g) above, in making a final decision as to the effect of the undertaking. The FMHPO shall provide the SHPO and the FMFADA a written summary of the final decision that contains the justification for the decision and evidence of consideration of the opinions of the FMFADA, the SHPO, the public, and/or any stakeholders, and the ACHP and/or the NPS, if applicable.

(ii) Disagreement with the SHPO.

(a) The FMHPO shall notify the FMFADA of the objection and make a good faith effort to resolve the disagreement with the SHPO.

(b) The SHPO shall request technical assistance from the ACHP and/or the NPS, and shall forward any comments received from the ACHP and/or the NPS to the FMHPO and the Secretary of Administration. The FMHPO shall forward all project information, to include all comments received from the SHPO, the FMFADA, and any other comments received from the public or any stakeholders pursuant to the protocol established in Stipulation IV.D.2.iii)g) above, to the Secretary of Administration and request the Secretary to determine if the undertaking may proceed as designed, may proceed with modifications, may not proceed or if further consultation between the FMHPO and the SHPO to resolve the objection is necessary. The Secretary shall consider any comments of the ACHP, the NPS, and any comments received from the public and any stakeholders in making a final decision. The FMHPO shall notify the SHPO and the FMFADA of the Secretary's decision and provide evidence of the consideration of the views of the ACHP, the NPS, the public, and/or any stakeholders.

c) If the FMHPO determines that the adverse effect still exists, the FMHPO shall, in consultation with the SHPO and the FMFADA, and other stakeholders pursuant to the protocol developed in Stipulation IV.D.2.iii)g) above, develop a legally binding mitigation agreement (Mitigation Agreement) with the agreed upon measures to mitigate the adverse effect.

1) The proposed mitigation shall be proportional to the nature and severity of the effect, and the significance of the historic property impacted.
2) The mitigation shall be, to the greatest extent practicable, related to the historic property affected, however, alternative mitigations may be considered when appropriate.
3) The mitigation shall have the greatest public benefit possible.
4) The FMHPO shall ensure that the mitigation is carried out.
5) The Mitigation Agreement shall include the following:

(i) *Duration:* Provisions for the timeframe in which it will remain in effect, termination, and reconsideration of terms if the undertaking has not been implemented within a specified time.

(ii) *Discoveries:* Provisions for unexpected archaeological discoveries during the implementation of the terms of the Mitigation Agreement.
(iii) *Amendments:* Procedures to amend the Mitigation Agreement.
(iv) *Termination:* Provisions if any signatory determines that the terms of the Mitigation Agreement cannot be, or are not being, carried out.

d) If the Commonwealth, the SHPO or the FMFADA fail to resolve adverse effects through a mutually acceptable Mitigation Agreement, then the FMHPO may request, or upon consideration of a request from any stakeholder pursuant to the protocol developed in Stipulation IV.D.2.iii)g) above, may request technical assistance from the ACHP and/or the NPS in resolving the dispute. The FMHPO shall forward to the Secretary of Administration the comments of the Commonwealth, the SHPO, the FMFADA, any comments received from the ACHP and/or the NPS, and any comments received from the public or any stakeholders pursuant to the protocol established in Stipulation IV.D.2.iii)g) above, for the Secretary's consideration in resolving the dispute. The Secretary shall consider any comments of the ACHP, the NPS, and any comments received from the public and/or any stakeholders in making a final decision. The FMHPO shall notify the Commonwealth, the SHPO, and the FMFADA of the Secretary's decision and evidence of consideration of the views of the ACHP and/or the NPS, and any comments received from the public and/or any stakeholders.

5. Streamlined Review Process

i) After twenty-four (24) months from the date of the first project submitted for review pursuant to Stipulation IV.D.4 above, the FMHPO may recommend to the Commonwealth, the SHPO, the FMFADA, and any stakeholders identified pursuant to the protocol established in Stipulation IV.D.2.iii)g) above, changes to streamline the review process.

ii) Any changes to the review process as described in Stipulation IV.D.4 shall be made in accordance with the provisions for amendment found in the state-level MOU.

V. Administrative Provisions:

A. The Army shall ensure prior to closure the following:

1. Professional Standards and Qualifications

i) For the purposes of this Agreement, "Qualified Staff" is defined as an individual who meets the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-44739). Qualified Staff will have professional qualifications, training, and experience relevant to the technical requirements of a given

undertaking.

ii) All archaeological, history, cultural landscape, or architectural history investigations carried out in pursuant to this Agreement shall be conducted by or under the direct supervision of an individual or individuals who meet, at a minimum, the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-44739).

.

2. Review of Documentation

If a Consulting Party fails to respond to an Army submission for review within thirty (30) calendar days or such other time specified in this Agreement or the submission, the Army may assume no comment from the non-responding party. Army is not required to consider comments received after the specified time.

3. Post Review Discoveries

i) In the event of any post-review discovery of archaeological materials during any of its activities, all work in the area of the discovery shall stop immediately, and the Fort Monroe Cultural Resources Manager shall be notified. The Army shall ensure that no unauthorized personnel have access to the site and no further work is done in the area of discovery until the Army has complied with 36 CFR Part 800.13(b).

ii) The Army shall within forty-eight (48) hours notify and consult with the SHPO for any post review discoveries and with the VCI, the Shawnee Tribe, the Absentee-Shawnee Tribe of Indians of Oklahoma, and the Catawba Indian Nation Tribal Historic Preservation Office (CIN-THPO), if appropriate.

iii) Human remains and associated funerary objects encountered during the course of actions taken as a result of this Agreement shall be treated in accordance with NAGPRA (25 U.S.C. Sec 3001 et seq.). Informational copies of any notifications made under NAGPRA shall be provided to the SHPO and the Shawnee Tribe, the Absentee-Shawnee Tribe of Indians of Oklahoma, and the CIN-THPO.

iv) The Army shall ensure that archaeological artifacts recovered from archaeological investigations or post review discoveries shall be stored in a curatorial repository that meets federal standards stipulated in 36 CFR Part 79, *The Curation of Federally Owned and Administered Archaeological Collections*.

v) The Army shall consult with the Shawnee Tribe, the Absentee-Shawnee Tribe of Indians of Oklahoma, the CIN-THPO, and the VCI regarding curation practices of Native American archaeological artifacts.

4. Dispute Resolution

   i) Should any Signatory to this Agreement object to the performance by the Army of any obligation under this Agreement, the Army shall consult with the objecting Signatory to resolve the objection.

   ii) If after initiating such consultation the Army determines that the objection cannot be resolved through consultation, the Army shall forward all documentation relevant to the objection to the ACHP, including the proposed response to the objection.

   iii) Within thirty (30) calendar days after receipt of all pertinent documentation, the ACHP shall exercise one of the following options:
      a) Advise the Army that the ACHP concurs in the proposed response to the objection, whereupon the Army shall respond to the objection accordingly;
      b) Provide the Army with recommendations, which the Army shall take into account in reaching a final decision regarding its response to the objections; or
      c) Respond to the Army that it will not consider the dispute or provide recommendations, in which case the Army may proceed with the proposed resolution; or
      d) Notify the Army that the objections shall be referred for ACHP comment pursuant to 36 CFR 800.7(c), and proceed to refer the objection for comment. Any ACHP comment rendered pursuant to this stipulation shall be understood to apply only to the subject of the objection: all other responsibilities of the parties stipulated in this Agreement shall remain unchanged.

   iv) Should the ACHP not exercise one of the above options within thirty (30) calendar days after receipt of all pertinent documentation, the Army may move forward with its proposed response to the objection and make a final decision on how to respond to the objection.

5. Emergency Actions

   i) Emergency actions are those actions deemed necessary by the Army as an immediate and direct response to an emergency situation, which is a disaster or emergency declared by the President, tribal government, or the Governor of the State, or other immediate threats to life or property. Emergency actions under this Agreement are only those implemented within thirty (30) calendar days from the initiation of the emergency situation.

   ii) If the emergency action has the potential to affect historic properties, the Army shall notify the SHPO and other parties as appropriate prior to undertaking the action, when feasible. As part of the notification, the Army shall provide a plan to

address the emergency. The SHPO shall have seven (7) calendar days to review and comment on the plan to address the emergency. If the SHPO does not comment or object to the plan within the review period, the Army shall implement the proposed plan.

iii) If the Army is unable to consult with the SHPO prior to carrying out emergency actions, the Army shall notify the SHPO and other parties as appropriate within forty-eight (48) hours after the initiation of the emergency action. This notification shall include a description of the emergency action taken, the effects of the action(s) to historic properties, and, where appropriate, any further proposed measures to avoid, minimize, or mitigate potential adverse effects to historic properties. The SHPO shall have seven (7) calendar days to review and comment on the proposal where further action is required to address the emergency. If the SHPO does not object to the plan within the review period, the Army shall implement the proposed plan.

iv) Where possible, such emergency actions shall be undertaken in a manner that does not foreclose future preservation or restoration of historic properties. Where such emergency actions may affect historic buildings, they shall be undertaken in a manner that is consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. In addition, where possible, such actions shall be done with on-site monitoring by the appropriate preservation professional who meets, at a minimum, the *Professional Qualifications Standards* in his or her field of expertise.

v) Where the SHPO and/or any other party has reason to believe that a historic property may be adversely affected by an emergency action, the party shall submit a request to the Army to review and comment on that action.

vi) Immediate rescue and salvage operations conducted to preserve life or property are exempt from these and all other provisions of this Agreement.

6. Annual Reporting

The Army shall provide an annual status report within twelve (12) months of the execution of this Agreement, and every twelve (12) months thereafter, to all Consulting Parties until the Army's obligations under this Agreement are complete.

7. Annual Meeting

i) The Army shall conduct an annual meeting with the Consulting Parties within twelve (12) months of the execution of this Agreement and every twelve (12) months thereafter until the Army's obligations under this Agreement are complete.

ii) The purpose of the annual meeting is to review implementation and achieved outcomes of the terms of this Agreement and to determine whether amendments are needed.

8. Amendment & Termination

i) Amendment

Prior to the completion of property transfer out of Army ownership or control, any Signatory to this Agreement may request that this Agreement be amended, whereby the Signatory Parties shall consult to consider whether such amendment is necessary. Any amendment to this Agreement shall become effective upon the signature of all the Signatory Parties.

Notwithstanding the above, any modification of the Direct APE extending beyond the boundary shown in Appendix B shall be effective upon an agreement in writing between the Army and the SHPO and transmittal of the new boundary to the Signatories.

ii) Termination

Prior to the completion of the property transfer, any Signatory to this Agreement may terminate this Agreement by providing sixty (60) calendar days written notice to the Army and the other Signatory Parties. During the period after notification and prior to termination, the Army and the other Signatory Parties shall consult to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the Army shall negotiate a new agreement per 36 CFR Part 800.14(b), or request, consider, and respond to the ACHP's formal comments per 36 CFR Part 800.7.

9. Anti-Deficiency Act

The Army's obligations under this Agreement are subject to the availability of appropriated funds, and the stipulations of this Agreement are subject to the provisions of the Anti-Deficiency Act. The Army shall make reasonable and good faith efforts to secure the necessary funds to implement its obligations under this Agreement. If compliance with the Anti-Deficiency Act alters or impairs the Army's ability to implement its obligations under this Agreement, the Army shall consult in accordance with the amendment and termination procedures found at Stipulation V.A.8 above.

10. Duration

The effective date of this Agreement shall be the date of the last signature of the Signatory Parties**.** The Army's obligations under this Agreement with respect to the property or any portion thereof are limited to those obligations accruing prior to transfer of the property or portion thereof out of Army ownership.

B. The Commonwealth shall ensure after the transfer of the reversionary land the following:

1. Professional Standards and Qualifications

i) All archaeological studies resulting from this Agreement, including data recovery plan(s), shall be consistent with the *Secretary of the Interior's Standards and Guidelines for Archeological Documentation (48 FR 4434-37)* and the SHPO's *Guidelines for Conducting Cultural Resource Survey in Virginia: Additional Guidance for the Implementation of the Federal Standards Entitled Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (48 FR 44742, September 29, 1983)* 1999, rev. 2003) or subsequent revisions or replacements to these documents, and shall take into account the ACHP's publications, *Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites* (1999) and *Section 106 Archaeology Guidance* (June 2007).

ii) All historical and architectural studies resulting from this Agreement shall be consistent with pertinent standards and guidelines of the Secretary of the Interior, including as applicable the Secretary of the Interior's *Standards and Guidelines for Historical Documentation* (48 FR 44728-30) and for *Architectural and Engineering Documentation* (48 FR 44730-34), and the SHPO's *Guidelines for Conducting Cultural Resource Survey in Virginia: Additional Guidance for the Implementation of the Federal Standards Entitled Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (48 FR 44742, September 29, 1983)* 1999, rev. 2003) or subsequent revisions or replacements to these documents.

iii) All archaeological work carried out pursuant to this Agreement shall be conducted by or under the direct supervision of an individual or individuals who meet, at a minimum, the qualifications for archaeology set forth in the Secretary of Interior's *Professional Qualifications Standards* (62 FR 33707, June 20, 1997).

iv) All archaeological work on submerged lands shall be conducted under the direct supervision of an archaeologist who meets, at a minimum, the qualifications set forth in the *Professional Qualifications Standards* and has demonstrated experience in maritime history and maritime archaeology.

v) All evaluations of buildings or structures shall be carried out by or under the

supervision of an individual or individuals who meet, at a minimum, the qualifications for architectural history set forth in the *Professional Qualifications Standards* while all design work on historic buildings and structures shall be carried out by or under the supervision of an individual or individuals meeting the qualifications for historic architecture set forth in the *Professional Qualifications Standards*.

vi) All work concerning cultural landscapes shall be carried out by or under the supervision of a qualified landscape historian, landscape architect, or other pertinent landscape expert, and in accordance with the applicable guidance set forth in Preservation Brief 36 *Protecting Cultural Landscapes Planning, Treatment and Management of Historic Landscapes* (National Park Service 1994) and *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (National Park Service 1996).

2. Review of Documentation

The SHPO, the FMFADA, and any stakeholder identified pursuant to the protocol established in Stipulation IV.D.2.iii)g) above agree to respond to any request for review pursuant to actions arising from this Agreement within thirty (30) calendar days of confirmed receipt unless otherwise specified. If no response from the SHPO, the FMFADA or any stakeholder is received within thirty (30) calendar days, the Commonwealth may assume that the non-responding party has no comment.

3. Post Review Discoveries

i) The Commonwealth shall ensure that contracts for activities involving ground disturbance and/or construction contain the following provisions for the treatment of post review discoveries:
   a) In the event that previously unidentified archaeological resources are discovered during any ground disturbing activities and/or construction, all work in the area of the discovery shall stop immediately and the contractor responsible for the construction site shall notify the project proponent and the FMHPO. The contractor shall ensure that no unauthorized personnel have access to the site and no further work is done in the area of the discovery until the FMHPO notifies the contractor that work may proceed;
   b) The project proponent shall engage an archaeologist meeting the professional standards set forth in Stipulation V.B.1.iii) above. The FMHPO and the project proponent's archaeologist shall meet on site and establish the area where further subsurface remains are likely to occur. The FMHPO shall then notify the contractor that work may resume outside of the designated archaeologically sensitive area.
   c) Within two (2) business days of the discovery, the FMHPO shall notify and

consult with the SHPO, other stakeholders as appropriate, and, if the resource is likely to be prehistoric, the VCI, the CIN-THPO, the Shawnee Tribe and the Absentee-Shawnee Tribe of Indians of Oklahoma. The notification shall include the FMHPO's assessment of the eligibility of the resource in terms of the NRHP criteria and the proposed plan for avoidance, protection or recovery of information. The SHPO and other stakeholders shall have two (2) business days to comment on the plan. The FMHPO shall ensure that all comments received within two (2) business days are addressed in the final treatment plan. The project proponent's archaeologist shall then implement the plan. The project proponent shall notify the FMHPO and the SHPO when the recovery of information or other agreed upon treatment measures specified in the plan are complete. The FMHPO shall then notify the contractor that work may proceed in the designated archaeologically sensitive area while a technical report is prepared.

d) The project proponent shall provide copies of the draft technical report to the Commonwealth, the FMHPO, the SHPO and any stakeholders identified pursuant to the protocol established in Stipulation IV.D.2.iii)g) above for review and comment. All comments received within thirty (30) calendar days of report receipt shall be addressed in the final report.

ii) Human Remains

a) The Commonwealth shall make all reasonable efforts to avoid disturbing gravesites, including those containing Native American human remains and associated artifacts. The Commonwealth shall treat all human remains in a manner consistent with the ACHP "Policy Statement Regarding Treatment of Burial Sites, Human Remains and Funerary Objects," (http://www.achp.gov/docs/hrpolicy0207.pdf).

b) The Commonwealth shall ensure that human skeletal remains and associated funerary objects encountered during the course of actions taken as a result of this Agreement shall be treated in accordance with the Regulations Governing Permits for the Archaeological Removal of Human Remains (Virginia Register 390-01-02) found in the *Code of Virginia* (10.1-2305, et seq., Virginia Antiquities Act) and, in the case of Native American burials, in a manner developed in consultation with the VCI, the CIN-THPO, the Shawnee and the Absentee-Shawnee of Indians of Oklahoma, to include the CIN-THPO burial policy. If removal is the proposed treatment, the project proponent shall apply for a permit from the SHPO for the removal of human remains in accordance with the regulations stated above.

c) Prior to issuance of any permit for the removal of Native American remains, the SHPO shall notify the VCI, the CIN-THPO, the Shawnee and the Absentee-Shawnee of Indians of Oklahoma. The permit shall include the condition that all parties involved in the permit action shall make a good faith effort to ensure that the general public is excluded from viewing any Native American burial site or associated funerary artifacts. All parties involved in

the permit action shall release no photographs of any Native American burial site or associated funerary artifacts to the press or general public.

d) The project proponent shall deliver any Native American Indian human skeletal remains and associated funerary artifacts recovered pursuant to any permit issued to the appropriate tribe to be reinterred. The disposition of any other human skeletal remains and associated funerary artifacts shall be governed as specified in any permit issued by the SHPO.

e) The Commonwealth shall ensure that all archaeological materials recovered from archaeological investigations or post-review discoveries shall be stored in a curatorial repository that meets federal standards stipulated in 36 CFR 79, *The Curation of Federally-Owned and Administered Archaeological Collections.*

f) The FMHPO shall consult with the CIN-THPO, the Shawnee and the Absentee-Shawnee of Indians of Oklahoma, and the VCI with regards to the curation and display of Native American archaeological artifacts.

4. Dispute Resolution

i) After the transfer of the property to the Commonwealth and the closure of Fort Monroe, should any of the remaining signatories with duties and responsibilities pursuant to this Agreement (hereinafter the term "Remaining Signatories" refers solely to the Commonwealth, the SHPO, and the FMFADA) object in writing to the other parties regarding any action carried out or proposed with respect to this Agreement or to the implementation of its terms, the parties shall consult to resolve the objection.

ii) If after initiating such consultation any of the Remaining Signatories finds that further consultation will not resolve the objection, the objecting party shall so notify the other parties in writing and the FMHPO. The FMHPO shall then forward all documentation relevant to the objection, including a proposed response to the objection, to the Secretary of Administration.

iii) Within thirty (30) calendar days after receipt of the documentation, the Secretary of Administration shall exercise one of the following options:

a) Advise the Remaining Signatories that the Secretary of Administration concurs with the proposed response to the objection, whereupon the objection shall be resolved accordingly; or

b) Provide the parties with the recommendation of the Secretary of Administration, whereupon the objection shall be resolved according to the Secretary's direction.

c) The Remaining Signatories shall take into account any recommendations or comments provided by the Secretary in accordance with this stipulation with reference only to the subject of the objection. The responsibilities of the

Remaining Signatories under this Agreement that are not the subject of the objection shall remain unchanged.

iv) If at any time after the transfer of the property to the Commonwealth should a member of the public raise an objection pertaining to a proposed action or the implementation of the measures stipulated in this Agreement, the Remaining Signatory party receiving the objection shall notify the other parties to this Agreement in writing of the objection. The Remaining Signatories shall consult regarding the objection, and the Commonwealth shall take the objection and the comments from the SHPO and the FMFADA into account in responding to the objection.

5. Emergency Actions

i) Emergency actions are those actions deemed necessary by the Commonwealth as an immediate and direct response to an emergency situation, which is a disaster or emergency declared by the President or the Governor of the State, or other immediate threats to life or property. Emergency actions under this Agreement are only those implemented within thirty (30) calendar days from the initiation of the emergency situation.

ii) If the emergency action has the potential to affect historic properties, the Commonwealth shall notify the SHPO and other parties as appropriate prior to undertaking the action, when feasible. As part of the notification, the Commonwealth shall provide a plan to address the emergency. The SHPO shall have seven (7) calendar days to review and comment on the plan to address the emergency. If the SHPO does not comment or objects to the plan within the review period, the Commonwealth shall implement the proposed plan.

iii) If the Commonwealth is unable to consult with the SHPO prior to carrying out emergency actions, the Commonwealth shall notify the SHPO and other parties as appropriate within forty-eight (48) hours after the initiation of the emergency action. This notification shall include a description of the emergency action taken, the effects of the action(s) to historic properties, and, where appropriate, any further proposed measures to avoid, minimize, or mitigate potential adverse effects to historic properties. The SHPO shall have seven (7) calendar days to review and comment on the proposal where further action is required to address the emergency. If the SHPO does not object to the plan within the review period, the Commonwealth shall implement the proposed plan.

iv) Where possible, such emergency actions shall be undertaken in a manner that does not foreclose future preservation or restoration of historic properties. Where such emergency actions may affect historic buildings, they shall be undertaken in a manner that is consistent with the Design Standards. In addition, where

possible, such actions shall be done with on-site monitoring by the appropriate preservation professional who meets, at a minimum, the *Professional Qualifications Standards* in his or her field of expertise.

v) Where the SHPO and/or any other party has reason to believe that a historic property may be adversely affected by an emergency action, the party shall submit a request to the Commonwealth to review and comment on that action.

vi) Immediate rescue and salvage operations conducted to preserve life or property are exempt from these and all other provisions of this Agreement.

6. Annual Reporting

The Commonwealth shall provide an annual status report within twelve (12) months of the transfer of the land to its ownership or control, and every twelve (12) months thereafter, to the SHPO and the FMFADA to review implementation of the terms of this Agreement and to determine whether amendments are needed. Annual reports shall be prepared by the Commonwealth and submitted to the SHPO and the FMFADA as long as the Commonwealth retains ownership or control of properties at Fort Monroe. The annual report shall also be made available to the interested public on the FMFADA web site.

7. Annual Meeting

i) The Commonwealth shall coordinate an annual meeting with the SHPO, the FMFADA, and stakeholders as identified pursuant to the protocol established in Stipulation IV.D.2.iii)g) above, within twelve (12) months of the transfer of land to its ownership or control, and every twelve (12) months thereafter as long as the Commonwealth retains ownership or control of properties at Fort Monroe.

ii) The purpose of the annual meeting is to review implementation and achieved outcomes of the terms of this Agreement and the state-level MOU, and to determine whether amendments are needed.

8. Amendment & Termination

i) Amendment
   a) After property transfer to the Commonwealth and the closure of Fort Monroe, any Remaining Signatory party may request in writing that this Agreement be amended, whereby the parties shall consult to consider whether such amendment is necessary.
   b) If the Remaining Signatories agree that such amendment to this Agreement is necessary, the parties shall consult to develop an amendment. All Remaining Signatories must agree to the proposed amendment. Any amendment to this

Agreement shall become effective upon the date of the last signature of the Remaining Signatories.

c) The state-level MOU shall then be amended to reflect any changes made to this Agreement within thirty (30) calendar days that the amendment becomes effective.

ii) Termination

a) If, after property transfer to the Commonwealth and the closure of Fort Monroe, any of the Remaining Signatories to this Agreement finds that it cannot implement the terms of this Agreement or that this Agreement is not being implemented, such party may propose to the other Remaining Signatories that this Agreement be terminated. The party proposing termination shall notify the other Remaining Signatories in writing of its intention to terminate this Agreement. The notification shall include the reason(s) why this Agreement should be terminated.

b) Within thirty (30) calendar days after receipt of the notification, the Remaining Signatories shall consult to amend this Agreement or seek alternatives to termination. If consultation does not result in amendment after ninety (90) calendar days of notification of the intent to terminate, and if two of the three Remaining Signatories agree to termination, the Commonwealth shall notify the Governor of the Commonwealth of Virginia in writing of the desire to terminate the Agreement. The notification shall include all documentation relevant to the proposed termination.

c) This Agreement shall only be terminated by the written notification of the Governor. Within sixty (60) calendar days of receipt of the notification to terminate, the Governor shall either terminate this Agreement or direct the Remaining Signatories to continue consultation under the Agreement. The decision of the Governor is final.

d) The state-level MOU shall be amended or terminated as necessary to reflect the termination of this Agreement within thirty (30) calendar days of a decision from the Governor.

e) If this Agreement is terminated, the land owned by the Commonwealth at Fort Monroe shall be subject to all applicable state environmental laws and regulations.

9. Duration

The effective date of the Agreement shall be the date of the last signature of the Signatories. This Agreement shall remain in effect for fifty (50) years after the date of the last Signatory's signature. Six (6) months prior to such time, the Remaining Signatories shall consult to reconsider the terms of this Agreement and revise or amend it in accordance with Stipulation V.B.8 above. Additionally, the duration of this Agreement may be extended upon the signature of all the Remaining Signatories.

Execution and implementation of this Agreement evidences that the Army has taken into account the effects of the Undertaking on historic properties and has afforded the ACHP a reasonable opportunity to comment on the undertaking.

CONCURRENT APPROVAL AND SIGNATURE PAGE FOR THE
PROGRAMMATIC AGREEMENT
AMONG
UNITED STATES ARMY
VIRGINIA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION
COMMONWEALTH OF VIRGINIA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
AND
NATIONAL PARK SERVICE
FOR THE
CLOSURE AND DISPOSAL OF FORT MONROE, VA

UNITED STATES ARMY

By: Anthony D. Reyes
Colonel Anthony D. Reyes
Garrison Commander, Fort Monroe

Date: 5 March 2009

CONCURRENT APPROVAL AND SIGNATURE PAGE FOR THE
PROGRAMMATIC AGREEMENT
AMONG
UNITED STATES ARMY
VIRGINIA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION
COMMONWEALTH OF VIRGINIA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
AND
NATIONAL PARK SERVICE
FOR THE
CLOSURE AND DISPOSAL OF FORT MONROE, VA

VIRGINIA STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: 3/12/09
Kathleen S. Kilpatrick
Director, Department of Historic Resources

CONCURRENT APPROVAL AND SIGNATURE PAGE FOR THE
PROGRAMMATIC AGREEMENT
AMONG
UNITED STATES ARMY
VIRGINIA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION
COMMONWEALTH OF VIRGINIA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
AND
NATIONAL PARK SERVICE
FOR THE
CLOSURE AND DISPOSAL OF FORT MONROE, VA

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: _____ Date: 4/22/09
John M. Fowler
Executive Director

CONCURRENT APPROVAL AND SIGNATURE PAGE FOR THE
PROGRAMMATIC AGREEMENT
AMONG
UNITED STATES ARMY
VIRGINIA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION
COMMONWEALTH OF VIRGINIA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
AND
NATIONAL PARK SERVICE
FOR THE
CLOSURE AND DISPOSAL OF FORT MONROE, VA

COMMONWEALTH OF VIRGINIA

By: _____ Date: 4/16/09
The Honorable Timothy M. Kaine
Governor of Virginia

CONCURRENT APPROVAL AND SIGNATURE PAGE FOR THE
PROGRAMMATIC AGREEMENT
AMONG
UNITED STATES ARMY
VIRGINIA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION
COMMONWEALTH OF VIRGINIA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
AND
NATIONAL PARK SERVICE
FOR THE
CLOSURE AND DISPOSAL OF FORT MONROE, VA

FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORTY

By: _____ Date: March 10, 2009
William A. Armbruster
Executive Director

CONCURRENT APPROVAL AND SIGNATURE PAGE FOR THE
PROGRAMMATIC AGREEMENT
AMONG
UNITED STATES ARMY
VIRGINIA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION
COMMONWEALTH OF VIRGINIA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
AND
NATIONAL PARK SERVICE
FOR THE
CLOSURE AND DISPOSAL OF FORT MONROE, VA

NATIONAL PARK SERVICE

By: _____ Date: MAR 16 2009
Dennis R. Reidenbach
Regional Director, Northeast Region

CONCURRENT APPROVAL AND SIGNATURE PAGE FOR THE
PROGRAMMATIC AGREEMENT
AMONG
UNITED STATES ARMY
VIRGINIA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION
COMMONWEALTH OF VIRGINIA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
AND
NATIONAL PARK SERVICE
FOR THE
CLOSURE AND DISPOSAL OF FORT MONROE, VA

CONCURRING PARTIES

Absentee-Shawnee Tribe of Indians of Oklahoma _____

American Legion Post 48 _____

APVA Preservation Virginia _____

Buckroe Civic Association _____

Catawba Indian Nation _____

Citizens for a Fort Monroe National Park _____

City of Hampton _____

CONCURRENT APPROVAL AND SIGNATURE PAGE FOR THE
PROGRAMMATIC AGREEMENT
AMONG
UNITED STATES ARMY
VIRGINIA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION
COMMONWEALTH OF VIRGINIA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
AND
NATIONAL PARK SERVICE
FOR THE
CLOSURE AND DISPOSAL OF FORT MONROE, VA

CONCURRING PARTIES

Civil War Preservation Trust _____

Coast Defense Study Group _____

Diocese of Richmond _____

Hampton University _____

Independent Citizen Association _____

National Historic Landmark
Stewards Association _____

National Parks Conservation
Association _____

CONCURRENT APPROVAL AND SIGNATURE PAGE FOR THE
PROGRAMMATIC AGREEMENT
AMONG
UNITED STATES ARMY
VIRGINIA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION
COMMONWEALTH OF VIRGINIA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
AND
NATIONAL PARK SERVICE
FOR THE
CLOSURE AND DISPOSAL OF FORT MONROE, VA

CONCURRING PARTIES

National Trust for Historic Preservation _____

Norfolk Historical Society _____

Norfolk Preservation Alliance _____

Old Point National Bank _____

Phoebus Civic Association _____

Phoebus Improvement League _____

Shawnee Tribe _____

CONCURRENT APPROVAL AND SIGNATURE PAGE FOR THE
PROGRAMMATIC AGREEMENT
AMONG
UNITED STATES ARMY
VIRGINIA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION
COMMONWEALTH OF VIRGINIA
FORT MONROE FEDERAL AREA DEVELOPMENT AUTHORITY
AND
NATIONAL PARK SERVICE
FOR THE
CLOSURE AND DISPOSAL OF FORT MONROE, VA

CONCURRING PARTIES

The Archaeological Society of Virginia _____

The Casemate Museum Foundation _____

The Contraband Historical Society _____

United Daughters of the Confederacy _____

Virginia Council on Indians _____

Virginia Department of Environmental Quality _____

Appendix A: Definitions

Agreement. The Programmatic Agreement memorialized in this document. Where not directly addressed in this Agreement, the rights, obligations, and other duties of the Army shall be determined by 36 CFR Part 800 and applicable Army Regulations and Guidance.

Consulting Party. A party as defined in 36 CFR Part 800.2(c), composed of Signatories, Invited Signatories, and Concurring Parties, and those parties who elect not to concur in this Agreement but participated in the consultation to develop this Agreement.

Signatory Party. A party with rights and obligations with respect to this Agreement, as defined in 36 CFR Part 800.6(c)(1). Signatories are: Department of the Army, Advisory Council on Historic Preservation (ACHP), the Virginia State Historic Preservation Officer (SHPO), and those Invited Signatories signing this Agreement.

Invited Signatory Party. A party that is invited by the Army to sign this Agreement as an Invited Signatory Party shall, upon becoming a Signatory Party, have the same rights with regards to seeking amendments or termination of this Agreement as the other Signatory Parties. Invited Signatory Parties are: the Commonwealth of Virginia (Commonwealth), the Fort Monroe Federal Area Development Authority (FMFADA), and the National Park Service.

Concurring Party. A consulting party concurring in this Agreement in accordance with 36 CFR Part 800.6(c)(3). Concurring Parties are the parties listed in Appendix F who sign this Agreement, other than the Signatories and Invited Signatories.

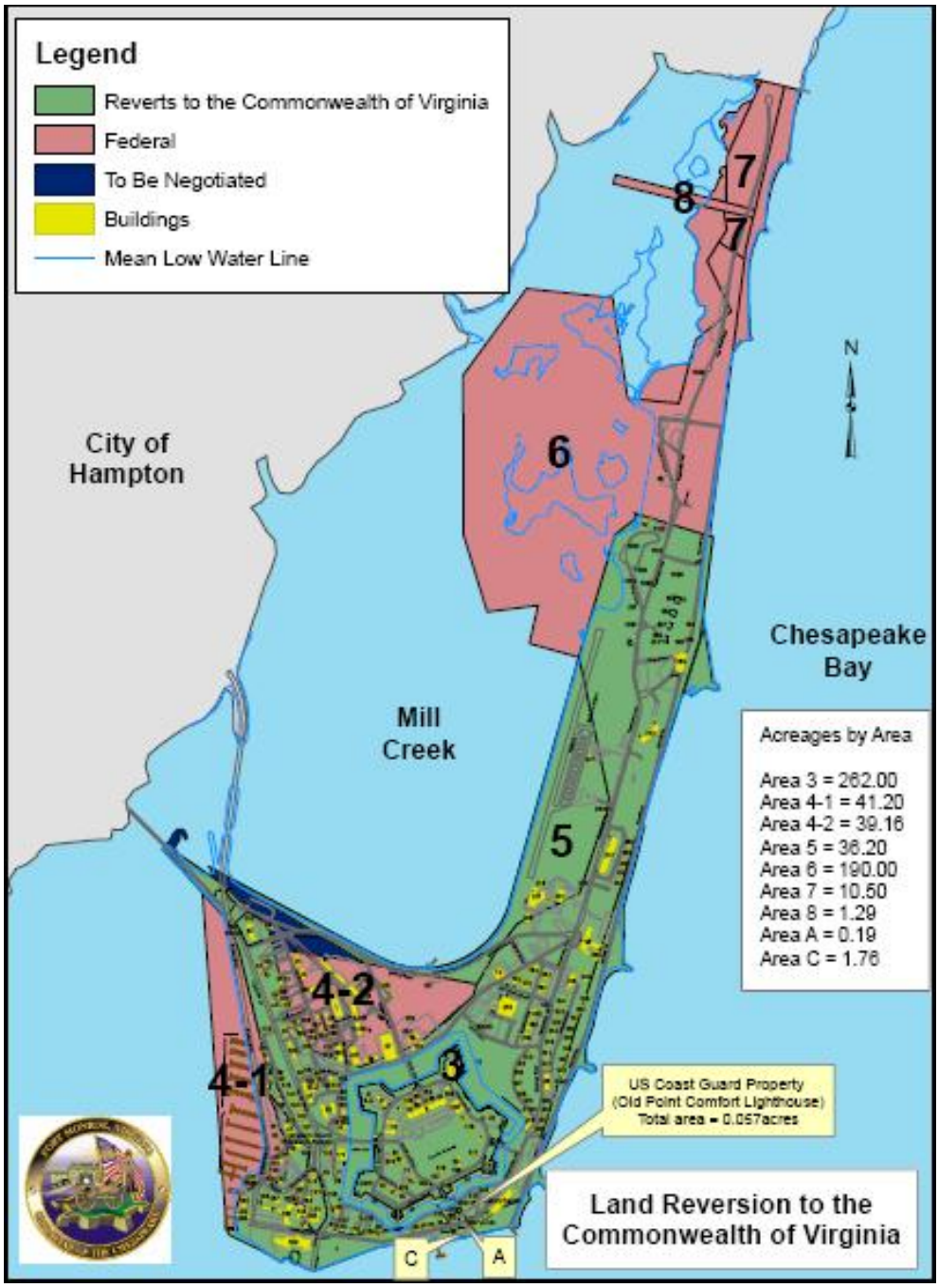
Undertaking. The transfer out of Federal ownership of Fort Monroe, the consequent disposal of excess and surplus property, and the conduct of environmental remediation in compliance with Section 120 of CERCLA until such time as the transfer occurs.

Appendix B: Fort Monroe Area of Potential Effects

Direct APE (in red): Area with the potential for direct physical effects

Indirect APE (in yellow): Area with the potential for indirect visual/auditory effects

Appendix C: Fort Monroe Ownership Status Map



Appendix D: The Contributing Non-archaeological Elements of the National Historic Landmark District of Fort Monroe, VA

HOUSING BUILDINGS (113)
1, 3, 15, 16, 17, 18, 19, 25, 26, 30, 31, 33, 34, 35, 43, 44, 45, 50, 51, 52, 54, 55, 61, 62, 63, 64, 90, 93, 101, 102, 103, 109, 110, 111, 112, 113, 114, 115, 118, 119, 120, 121, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 136, 137, 140, 141, 142, 143, 144, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 167, 186, 187, 188, 191, 192, 193, 194, 195, 196, 300, 301, 302, 303, 304, 305, 306, 307, 309, 311, 312, 313, 314, 316, 318, 320, 322, 324, 342, 344, 346, 348, 350, 352, 354, 356, 452, 454, 456, 458, 460

ADMINISTRATIVE BUILDINGS (60)
5, 6, 7, 8, 9, 10, 11, 14, 24, 27, 27A, 28, 37, 38, 42, 46, 47, 49, 53, 56, 57, 59, 73, 77, 80, 82, 83, 84, 85, 86, 87, 92, 100, 105, 105A, 116, 117, 133, 134, 135, 138, 139, 159, 161, 163, 166, 171, 182, 183, 204, 205, 209, 212, 213, 214, 216, 232, 233, 234, the Experimental Battery

SUPPORT BUILDINGS (2)
39, T28

THE STONE FORT, INCLUDING 11 NAMED AND NUMBERED SEGMENTS (1)
2, 20, 21, 22, 23, 48, the Boat Launch, the Flagstaff Bastion, the East Gate, the North Gate, the Postern Gate

STRUCTURES (3)
Bandstand in Continental Park (4), Gazebo behind Qtrs 119 (1087), Seawall (200)

LANDSCAPE FEATURES (9)
Cadet Battery/Park, Cannon Park, Jefferson Davis Arch/Park, the Fort Monroe Live Oaks, the Parade Grounds, Reeder Circle, the Pet Cemetery, Continental Park, Coast Artillery School Green Space.

OBJECT (1)
The Lincoln Gun

INDIVIDUALLY ELIGIBLE HISTORIC PROPERTIES (4) AS OF THE DATE OF SIGNATURE OF THIS AGREEMENT
Casemate stone fortification to include the moat and the Water Battery, Quarters 1, Quarters 17,

Chapel of the Centurion (166)

IDENTIFIED SIGNIFICANT INTERIORS AS OF THE DATE OF SIGNATURE OF THIS AGREEMENT

(According to the 2001 Fort Monroe HARAM)

HOUSING

Quarters #	Year Built	Interior Features
1	1819	Ornamental plaster dome above stairs; column & rope molding @ doors & window casings; paneled reveals; elliptical staircase; 2 marble fireplace mantels; 2 wood fireplace mantels; vaulted ceilings, 2nd floor bedrooms; quarter-sawn pine flooring; solarium floor w/ alternating light and dark stained boards; below-grade cistern or coal bin; century-old radiators; built-in casework on all floors.
3	1875	Original stairs; original window and door casings; original flooring.
15	1878	Original windows and doors
16	1875	Original stairs; original window and door casings; original flooring
17	1823	Original stairs and some original flooring; closets on either side of fireplace are probably historical; one or two original fireplaces may exist.
18	1823	Original stairs and some original flooring.
19	1880	Original slate fireplace mantels; hardware, moldings; quarter-sawn pine flooring; arched recesses in primary spaces; stair with turned balusters, acorn newels, and a hardwood handrail.
25	1934	Original windows and doors, including ten-light, paired French doors; casings and moldings; fireplace mantels; stairs; and wood flooring.
26	1934	Original windows and doors, including ten-light, paired French doors; casings and moldings; fireplace mantels; stairs; and wood flooring.
30	1934	Original windows and doors, including ten-light, paired French doors; casings and moldings; fireplace mantels; stairs; and wood flooring.
31	1934	Original windows and doors, including ten-light, paired French doors; casings and moldings; fireplace mantels; stairs; and wood flooring.

Quarters #	Year Built	Interior Features
33	1930	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
34	1930	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
35	1930	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
43	1930	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
44	1930	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
45	1930	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
51	1930	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
52	1930	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring. (52 B had a fire in 1936 which caused significant interior damage)
54	1930	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
55	1886	Original reeded window and door casings; radiators; moldings; oak flooring; arched recesses in primary spaces; stair with turned balusters, chamfered newels with beveled caps, and a stained hardwood handrail.
60	1890	Original fireplace with reeded surround; wood fireplace mantel shelf with brackets; raised panel doors with period hardware; random width pine floors and trim.
61	1889	Original stairs; probably original wood flooring; original window and door casings; built-in china cabinet
62	1889	Original reeded window and door casings; period hardware; moldings; faux fainted slate and wood fireplace mantels; built-in casework; wood flooring; front and rear stairs; original double porcelain laundry tubs in laundry; main stairs with ball newel caps, drop pendants, and reeded newel posts.
63	1889	Original reeded window and door casings; period hardware; moldings; incised slate fireplace mantels; built-in casework; wood flooring; front and rear stairs; main stairs with hardwood handrails and reeded newel posts; main fireplace retains a cast-iron coal gate.

Quarters #	Year Built	Interior Features
64	1934	Brick fireplace with wooden mantel and brick hearth; five paneled doors with period hardware, wood flooring and trim, plain casings, and a straight run stair.
90	1900	Original windows and doors, casings, and moldings; stairs; wood flooring.
93	1884	Original pocket doors; fluted pilaster trim; corner blocks; original staircase; arched openings into the bays on the 1st & 2nd floors
101	1906	Original window and door casings; built-in sideboard; fireplace mantel with mirrors; original window and door moldings; stairs with bracketed stringers; original wood flooring.
102	1906	Built-in sideboard; fireplace mantel with mirrors; original windows and door; original moldings; stairs with bracketed stringers; original wood flooring.
103	1906	Built-in sideboard; fireplace mantel with mirrors; original windows and doors; stairs with bracketed stringers; original wood flooring.
109	1906	Original windows and doors; stairs with open stringers; living room mantel; wood flooring.
110	1906	Original windows and doors; stairs with open stringers; living room mantel; wood flooring.
111	1906	Original windows and doors; stairs with open stringers; living room mantel; wood flooring.
112	1906	Original windows and doors; stairs with open stringers; living room mantel; wood flooring.
113	1906	Original windows and doors; stairs with open stringers; living room mantel; wood flooring.
114	1906	Original windows and doors; stairs with open stringers; living room mantel; wood flooring.
115	1906	Original windows and doors; stairs with open stringers; living room mantel; wood flooring.
118	1908	Original windows and doors; stairs with bracketed stringers; wood flooring; built-in casework in pantry.
119	1907	Original fireplace mantels; original multi-light French doors and transoms; original pocket doors; original staircase; probably original flooring.
120	1907	Original window and doors; stairs with bracketed stringers; wood flooring; built-in casework in pantry.
121	1909	Original window and doors; stairs with bracketed stringers; wood flooring.

Quarters #	Year Built	Interior Features
123	1909	Original window and doors; stairs with bracketed stringers; wood flooring.
124	1909	Original window and doors; stairs with bracketed stringers; wood flooring.
125	1909	Original window and doors; stairs with bracketed stringers; wood flooring; built-in casework in pantry.
126	1909	Original window and doors; stairs with bracketed stringers; wood flooring.
127	1909	Original window and doors on both sides of duplex; original wood flooring(127 B); stairs with bracketed stringers (127 B only)
128	1909	Original window and doors; stairs with bracketed stringers; wood flooring.
129	1909	Original window and doors, casings, and moldings; stairs with bracketed stringers; wood flooring; historic bathroom fixtures in attic bath; built-in cupboard and radiator with warming oven in dining room.
130	1906	Original windows and doors; stairs with open stringers; living room mantel; wood flooring.
131	1906	Original windows and doors; stairs with open stringers; living room mantel; wood flooring.
132	1906	Original windows and doors; stairs with open stringers; living room mantel; wood flooring.
136	1908	Some original windows and doors, casings, moldings, and wood flooring.
137	1908	Some original windows and doors, casings, moldings, and wood flooring.
140	1906	Original windows and doors; stairs with open stringers; living room mantel; wood flooring.
141	1910	Original windows and doors, stairs, and wood flooring; large louvered skylight over stair hall
142	1910	Original windows and doors, stairs, and wood flooring; large louvered skylight over stair hall
143	1910	Original window and some doors, including pocket doors, casings, and moldings; original stairs and quarter-sawn wood flooring; built-in casework; bay windows in dining room.
144	1910	Original window and some doors, including pocket doors, casings, and moldings; original stairs and quarter-sawn wood flooring; built-in casework; bay windows in dining room.

Quarters #	Year Built	Interior Features
146	1910	Original windows and doors, casings, and moldings; stairs; wood flooring.
147	1910	Original windows and doors, casings, and moldings; stairs; wood flooring.
148	1911	Original windows and doors, casings, and moldings; stairs with open stringers; living room mantel; built-in casework; wood flooring; historic air registers on 2nd floor.
149	1911	Original windows and doors, casings, and moldings; stairs with open stringers; living room mantel; built-in casework; wood flooring.
150	1911	Original windows and doors, casings, and moldings; stairs with open stringers; living room mantel; built-in casework; wood flooring; historic air registers on 2nd floor.
151	1911	Original windows and doors, casings, and moldings; stairs with open stringers; living room mantel; built-in casework; wood flooring; historic air registers on 2nd floor.
152	1911	Original windows and doors, casings, and moldings; stairs with open stringers; built-in casework; wood flooring.
153	1911	Original windows and doors, casings, and moldings; stairs with open stringers; built-in casework; wood flooring.
154	1911	Original windows and doors, casings, and moldings; stairs with open stringers; built-in casework; wood flooring; a mantel; a historic register.
155	1911	Original windows and doors, casings, and moldings; stairs with open stringers; built-in casework; wood flooring; historic heating registers may remain.
156	1911	Original windows and doors, casings, and moldings; stairs with open stringers; built-in casework; wood flooring.
157	1911	Fireplace mantels; original windows and doors, including two pairs of pocket doors, casings, and moldings; stairs with turned spindles; wood flooring; built-in casework in the pantry.
158	1911	Fireplace mantels; original windows and doors, including two pairs of pocket doors, casings, and moldings; stairs with turned spindles; wood flooring; historic bathroom fixtures in attic bath.
167	1921	Original windows and doors, casings, and moldings; stairs; wood flooring. There are unusual salmon-colored brick varied with red brick at building's corners, and at the window and door surrounds.

Quarters #	Year Built	Interior Features
186	1931	Original windows and doors, including ten-light, paired French doors; casings and moldings; fireplace mantels; stairs; and wood flooring.
187	1931	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
188	1931	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
191	1934	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
192	1934	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
193	1934	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
194	1934	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
195	1934	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.
196	1934	Original windows and doors, casings, and moldings; fireplace mantels, stairs; wood flooring.

ADMINISTRATION

Building #	Year Built	Interior Features
Flagstaff Bastion & Casemate Club	1826	Vaulted casemates and a number of gun emplacements with original traverse rings. Each three-way casemate is defined by a deep brick segmental arch supported by flush granite piers; surrounding brick laid in Flemish bond. One original fireplace mantel remains, in glazed Roman brick laid with red mortar.
7	1880	Original wooden stairs; hall lined with original beaded tongue-and-groove wainscoting; several cast iron columns exposed on 1st and 2nd floors; original pressed tin ceilings are currently hidden by acoustic tile.
9	1900	A few significant interior features remain, including cast iron columns and a section of pressed metal ceiling.

Building #	Year Built	Interior Features
20 (Casemate Museum)	1826	Two-room casemates with central fireplace and brick herringbone floors; rooms comprised of unpainted, exposed brick vaults and granite walls; fireplace mantels glazed Roman brick laid with red mortar (some painted).
21	1827	Two-room casemates with central fireplace and brick herringbone floors; rooms comprised of unpainted, exposed brick vaults and granite walls; fireplace mantels glazed Roman brick laid with red mortar
23	1823	The interior has never been wired or otherwise renovated for office use: it has always been used for storage, and thus retains a high degree of integrity.
24	1881	Original painted cast iron columns with ornamental caps supporting chamfered wood beams in the garage area.
27	1860	At the north end some historic paneling remains at wall and ceiling, some cast iron ornamental heat registers; some historic doors and transoms remain.
28	1938	Original open bays and loading area with historic submarine mine depot on ground floor; original main stairs; original two-story entry vestibule.
37	1934	Original stairs and some original doors, transoms, and casings.
42	1938	“Many original architectural features remain on the interior”.
49	1909	Historic light fixtures; beaded tongue-and-groove trim in wing.
56	1939	Original stair with steel pipe railing
77	1894	Original stair with oak handrail and turned balusters and molded newels; historic steel triangle bolted to stair stringer; original floor plan organization remains intact.
80	1897	The north end of the building features original stairs, fireplace mantels, doors, and trim which are Colonial Revival in character; south end features fireplace mantels with mottled brown and white ceramic tile, mantel shelves, and beveled mirrors which are all late Victorian in character; south end stairs features turned balusters and chamfered newel posts; north end stairs features square balusters and Colonial Revival features.
82	1898	Main entry retains an historic vestibule; two sets of steel stairs, one at each end of the building.
83	1898	Original oak trimmed post office vestibule remains with bronze boxes and grilles preserved in place; vestibule retains a pressed tin ceiling; upper floors have original wood flooring; some original door casings and transoms have been preserved.
87	1932	Original stair with steel railing; original terrazzo flooring on ground floor corridors.

Building #	Year Built	Interior Features
105	1905	Broad entry hall featuring a double stair with turned oak balusters and a molded handrail; the ceiling of the main entry hall has pressed tin plates featuring large central medallions; wooden columns and pilasters also remain; original pipe railings on 2nd floor mezzanine; original wood base, chair rail moldings, picture moldings, window and door casings; original five paneled doors and transoms remain' vestibule paneling is also original; one-over-one wood double-hung window sash appears to also be original.
133	1909	Two sets of original stairs; cast iron columns with ornamental capitols; skylights over the stairs; plaster ornamentation at Moreli Auditorium.
134	1909	Original stairs; some original doors, casings, and transoms
135	1908	Historic freight elevator; some ornamental heating grills
138	1909	Original vestibule; original molded plaster ornamentation in principle interior space.
139	1909	Original steel stairs.
161	1912	Two original stairs
163	1940	Original stair; some original doors, casings, and transoms.
166	1858	Exposed roof trusses in interior; memorial stained glass windows, including several prepared by Tiffany Studios in New York City; original windows include the triple lancet windows over the vestibule and in the vestry.
204	1910	Original wooden stair with steel pipe railing; open bay still serves an industrial function; upper floor has long corridor which features beaded wainscoting and chair rail molding.

Appendix E: The 21 Numbered Loci of Archaeological Site 44HT27

NRHP Eligible Loci

3, 4, 5, 6, 9, 10, 11, 12, 16, 19, 18A & 18B

Non-Eligible Loci

1, 2, 8, 14, 15, 18C, part of 20

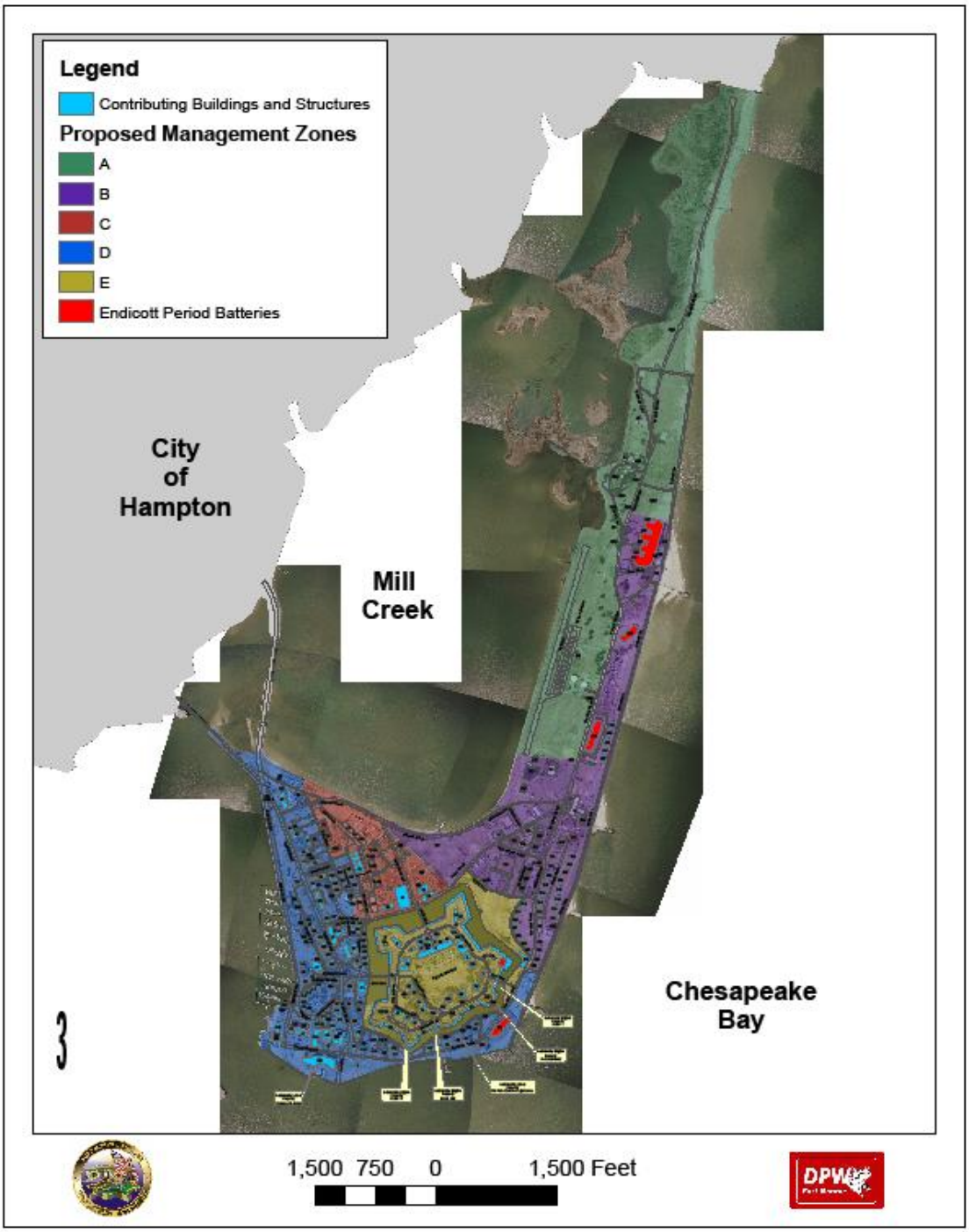
Requires Further Eligibility Determination

7, 13, 17, part of 20, 21

Appendix F: List of Consulting Parties

Absentee-Shawnee Tribe of Indians of Oklahoma
Advisory Council on Historic Preservation
American Legion Post 48
APVA Preservation Virginia
Buckroe Civic Association
Catawba Indian Nation
Citizens for a Fort Monroe National Park
City of Hampton
Civil War Preservation Trust
Coast Defense Study Group
Commonwealth of Virginia
Diocese of Richmond
Fort Monroe Federal Area Development Authority
Hampton University
Independent Citizen Association
National Historic Landmark Stewards Association
National Park Service
National Parks Conservation Association
National Trust for Historic Preservation
Norfolk Historical Society
Norfolk Preservation Alliance
Old Point National Bank
Phoebus Civic Association
Phoebus Improvement League
Shawnee Tribe
The Archaeological Society of Virginia
The Casemate Museum Foundation
The Contraband Historical Society
United Daughters of the Confederacy
Virginia Council on Indians
Virginia Department of Environmental Quality
Virginia Department of Historic Resources

Appendix G: Management Zones Map



Appendix H: Narrative Description of Management Zone Boundaries

Zone A (West Peninsula): The boundary for Zone A will follow the Buckroe/Fort Monroe property line in the north; the shoreline along Mill Creek from Buckroe/Fort Monroe property line to the southern edge of Walker Airfield in the west; a line from Mill Creek along the southern edge of DeRussy Field to Fenwick Road in the south, and; along the Seawall north of the Bay Breeze Community Center (Building 185) to the Buckroe/Fort Monroe property line in the east.

Zone B (East Peninsula): The northern boundary for Zone B will follow a line from the seawall just north of the Bay Breeze Community Center (Building 185) to Fenwick Road, then follow the center line of Fenwick Road to the south of DeRussy Field, then follow a line west to the Mill Creek shoreline at the southern edge of Walker Airfield; the western boundary will follow a line from Fenwick Road at the Bay Breeze Community Center (Building 185) to south of DeRussy Field, from the Mill Creek shoreline at the southern edge of Walker Field to the intersection of Stilwell Drive and North Gate Road; the southern boundary will be from Mill Creek at the intersection of Stilwell Drive and North Gate Road and proceed in a line southeast along the northern edge of the parking lot to the opening of the 2-72" diameter culvert pipes in the counterscarp wall north of the Northwest Bastion of the stone fort, proceed along the center line of Patch Road north to Griffith Road, then turn east and follow the center line of Griffith Road to Fenwick Road and beyond to the seawall in order to encompass all of the Wherry Housing; the eastern boundary extends north along the seawall from the termination of the southern boundary to the beginning of the northern boundary.

Zone C (North Gate Road/Stilwell Drive): The northern boundary for Zone C runs along the Mill Creek shoreline from north of the intersection of Stilwell Drive and North Gate Road to just north of the Stilwell Drive and Pratt Street intersection; the western boundary begins at the Mill Creek shoreline between the storage lot and basketball court east of Building 87 parking lot and heads south crossing Eustis Lane onto Pratt Street, then heads east at Reeder Circle between Building 268 and the tennis courts, moves south along the center line of Murray Street to Patch Road (including Building 168); the southern boundary follows the center line of Patch Road from the intersection of Patch Road and Murray Street to the opening of the 2-72" diameter culvert pipes in the counterscarp wall north of the Northwest Bastion of the stone fort; the eastern boundary runs from the opening of 2-72" diameter culvert pipes in the counterscarp wall north of the Northwest Bastion of the stone fort west to Mill Creek at the intersection of North Gate Road and Stilwell Drive diagonally to follow the eastern edge of parking lot across from Patch Road.

Zone D (McNair, Ingalls, Fenwick Corridors): The northern boundary for Zone D consists of the Fort Monroe property line at the bridges approaching the main entrance; the western boundary runs south along the shoreline to the southern end of the marina; the southern boundary begins at the southern end of the marina and follows the seawall to a point southeast of Wherry Housing Unit 300; the eastern boundary begins at the intersection of Fenwick Road and Griffith Road and proceeds south along the center line of Fenwick Road at East Gate to the counterscarp

then along the southern edge of the counterscarp to the Postern Gate; from the Postern Gate the boundary follows the southern and western edge of the counterscarp north to Patch Road and continues north across Patch Road and west of Building 168, north along the center line of Murray Street then heads west between Building 268 and the tennis courts at Reeder Circle; at Reeder Circle the boundary proceeds north along the center line of Pratt Street to the intersection of Pratt Street and Stilwell Drive, continues across Stilwell Drive until it hits Mill Creek, then north along the Mill Creek shoreline to the Fort Monroe property line at the entrance bridges.

Zone E (Stone Fort and Moat): The northern boundary for Zone E runs along the center line of Patch Road from the intersection of Patch Road and Griffith Road west to the intersection of Patch Road and Murray Street; the western boundary proceeds south from the Patch Road/Murray Street intersection and follows the counterscarp along Moat Walk to Postern Gate; the southern boundary begins at the Postern Gate and runs east along the counterscarp to East Gate, from East Gate it continues east following the center line of Fenwick Road and terminates at the intersection of Fenwick Road and Griffith Road(the southern boundary excludes the Water Battery, but includes the green space at East Gate); the eastern boundary begins at the intersection of Fenwick Road and Griffith Road and proceeds north along the center line of Griffith Road to the intersection of Griffith Road and Patch Road (the eastern boundary includes the green space between the counterscarp and Griffith Road as well as the Water Battery, but excluding Wherry Housing).

Endicott Batteries: The Individual boundaries for the seven Endicott batteries at Fort Monroe need to be established to separate them from the Management Zones in which they are located. The boundaries shall include the earthen protection system (the sand barrier that was placed around the concrete structure to protect the battery from incoming naval shelling) or space for these barriers where the protection system is now missing. The boundaries shall also include sufficient buffers to establish appropriate historic settings. The boundaries will be based on the historic usage of the individual batteries, i.e., field of fire and working areas, and their respective viewsheds. This information shall be identified and included in the Viewshed Analysis and Cultural Landscape Study to be conducted by the Army pursuant to Stipulations I.D and E and in updating the Fort Monroe NHL District nomination form pursuant to Stipulation I.H.1. Further consultation on a case by case basis is necessary to establish an appropriate buffer for each battery.

Individually eligible historic properties: Individual boundaries for the four properties identified as being significant in their own right. Boundaries should include sufficient buffers to establish appropriate historic settings. Further consultation on a case by case basis is necessary to establish an appropriate buffer for each individually eligible historic property. These buffers shall be identified and included in the draft NRHP nominations developed by the Army pursuant to Stipulation I.H.2.

This page intentionally left blank

.

APPENDIX G **ECONOMIC IMPACT FORECAST SYSTEM (EIFS) – MODELING RESULTS**

This page intentionally left blank.

Economic Impact Forecast System (EIFS) – Modeling Results

The EIFS Model

The primary metric used to determine significance of changes in socioeconomic activity under the three reuse intensity scenarios at Fort Monroe is the U.S. Army's Economic Impact Forecast System (EIFS) model. The basis of the EIFS analytical capabilities is the calculation of multipliers that are used to estimate the impacts resulting from Army-related changes in local expenditures or employment. In calculating the multipliers, EIFS uses the economic base model approach, which relies on the ratio of total economic activity to basic economic activity. Basic economic activity, in this context, is defined as the production or employment engaged to supply goods and services outside the ROI or by federal activities (such as military installations and their employees). According to economic base theory, the ratio of total income to base income is measurable and sufficiently stable so that future changes in economic activity can be forecasted. This technique is especially appropriate for estimating aggregate impacts and makes the economic base model ideal for the estimation and analysis of sustainability thresholds.

The multiplier is interpreted as the total impact on the economy of the region resulting from a unit change in its base sector; for instance, a dollar increase in local expenditures due to an expansion of its military installation. EIFS estimates its multipliers using a location-quotient approach based on the concentration of industries within the region relative to the industrial concentrations for the nation.

The user inputs into the model the data elements that describe the Army action: the change in expenditures; change in civilian or military employment; average annual income of affected citizens or military employees; the percent of civilians expected to relocate due to the Army's action; and the percent of the military living on post. From these inputs, the EIFS model provides projected changes in sales volume, income, employment, and population in the local economy. These variables are then used to measure and evaluate projected socioeconomic impacts. Sales volume is the direct and indirect change in local business activity and sales (total retail and wholesale trade sales, total selected service receipts, and value added by manufacturing). Employment is the total change in local employment due to the proposed action, including not only the direct and secondary changes in local employment, but also those personnel who are initially affected by the military action. Income is the total change in local wages and salaries due to the proposed action, which includes the sum of the direct and indirect wages and salaries, plus the income of the civilian and military personnel affected by the proposed action. Population is the increase or decrease in the local population as a result of the proposed action.

Evaluation of Socioeconomic Impacts

The basis of EIFS analytical capabilities is the calculation of multipliers that are used to estimate the impacts resulting from Army-related changes in local expenditures or employment. Once EIFS model projections are obtained, the Rational Threshold Values (RTV) profile allows

evaluation of the context and intensity of the impacts. The RTV profile reviews the historical trends for the defined region, based on U.S. Census data, and develops measures of local historical fluctuations in sales volumes, employment, income, and population. These evaluations indicate the intensity of the positive and negative changes of a project.

The RTV provides boundaries (threshold values) to assess the magnitude of an action's impacts. The largest historical changes (both increases and decreases) define the boundaries. These values thus provide a basis for comparing an action's impact to the historical fluctuations in a particular area. As such, the assignment of thresholds is made on a region-specific basis. Specifically, EIFS sets the boundaries by multiplying the maximum historical deviation of the following variables:

	Increase	Decrease
Sales Volume	100%	75%
Income	100%	67%
Employment	100%	67%
Population	100%	50%

The percentage allowances are arbitrary but sensible. The maximum positive historical fluctuation is allowed with expansion because of the positive connotations of economic growth. While cases of damaging economic growth have been cited, and although the zero-growth concept is being accepted by many local planning groups, the effects of reductions and closures are generally more controversial than those of expansions.

The major strengths of the RTV criteria are its specificity to the region under analysis and its basis on actual historical time-series data for the defined region. The EIFS impact model, in combination with the RTV, has proven successful in addressing perceived socioeconomic impacts. The EIFS model and the RTV technique for measuring significance are theoretically sound and have been reviewed on numerous occasions.

The severity of conceivable impacts accelerates in the following order: total sales volume, total personal income, total employment, and total population. Sales volume impacts may be alleviated by manipulation of variables such as inventory and new equipment. Impacts on workers or proprietors are not easily or immediately assessed. Changes in employment and income are of primary interest. Employment and income impacts are followed by changes in personal income, directly affecting individuals within the region. Population threshold indicators are extremely important because they reflect the effects on local government revenues, housing, education, infrastructure, and other social services. They should be weighted accordingly.

Note: The population changes reflected in the EIFS analyses below are related only to direct employment change within the ROI. These population estimates do not reflect other changes that may occur due to population migration resulting from increased economic development and housing projects. As such, other methods were used in this EIS to estimate population change and visitors to Fort Monroe, including regional population growth trends, changes in employment, housing development, and tourism estimates (further discussed in Appendix H).

Calculation of Model Input Parameters

The following presents the calculations and assumptions made in determining input parameters for the EIFS analysis for the closure of Fort Monroe. To be conservative, the EIFS model inputs reflect metrics for a predicted year(s) of maximum economic change over the full 20-year build out period. Assumptions here are for three 5-year periods of peak construction taking place during the 20-year build-out period. These estimates are considered to exceed the average annual change in economic activity, but are well below the cumulative effect, as EIFS is based on an assessment of annual changes in economic activity.

Change in Local Expenditures

Data on Fort Monroe 2005 local expenditures (provided through installation data [Roberts 2008]), conservative assumptions (e.g., residential use, recreational use, and mixed use) and estimates from the FMFADA Reuse Plan (2008) were used to approximate the potential change in local expenditures in the ROI for each of the three reuse scenarios, during the year(s) of peak economic change. Because a number of the jobs from Fort Monroe will be moved to within the ROI to Fort Eustis, it cannot be assumed that all of the expenditures from the closure would leave the ROI economy. About 21 percent of the total jobs at Fort Monroe (850 out of 4,051) will either be lost or moved outside the ROI to Fort Knox, and the same ratio has been applied to conservatively determine the amount of base expenditures that would leave the ROI. Some installation expenditures, such as operations, maintenance, and utilities, would be eliminated altogether during the closure, but some portion of expenditures such as training, supplies, and equipment would be anticipated to stay within the ROI, less the estimated 21 percent of total expenditures that is here associated with jobs lost or moving outside of the ROI.

Caretaker status reflects the loss of Fort Monroe annual expenditures that would be expected to be lost or moved outside of the ROI (a total of $27,440,000) without the benefit of expenditures generated by a reuse scenario.

The Upper, Middle, and Lower Bracket scenarios are based on conservative estimates that the redevelopment will generate approximately $250 million, $195 million, and $106 million in annual expenditures, respectively. These numbers were derived by considering the average expenditures for each type of employment, estimates for the maximum years of construction, estimated FMFADA operations and maintenance costs, FMFADA estimated capital costs for rehabilitation of reuse buildings, expected annual revenues related to tourism on the site, and expected annual expenditures by residents moving from outside the ROI. Each reuse scenario estimates expenditures based on the number and type of jobs that are expected to be created,

as outlined in Section 3.3. The estimates of annual operating and maintenance costs and capital costs were provided in the Technical Support Manual for the Reuse of Fort Monroe (20 November 2008) and the FMFADA Reuse Plan (FMFADA 2008). Construction expenditures for redevelopment are based on the historical cost per square foot for the economic activities to be created. It was conservatively assumed that there would be three periods of peak construction activity, each lasting a period of five years, over the 20-year build out period.

The tourism revenue estimates were calculated based on the expected number of tourists annually to the site (275,000) (FMFADA 2008) and the estimate that, on average, visitors to the Virginia Beach area spend approximately $311.64 per visit (Argawal Personal Communication 2008). In order to determine the annual expenditures by residents moving in from outside the ROI, it was estimated that 33 percent of new year-round residents would be coming from outside the ROI (Technical Support Manual).

The Bureau of Labor Statistics estimated that the average annual expenditure per household in 2005 was $46,409. An estimated 25 percent of new residents on the installation would be purchasing second homes, with annual expenditures assumed to be approximately half that of a year-round household. These annual expenditures were included in the analysis because, as there will be a net loss in employment and population in the region, the heavy emphasis on residential development in the reuse plan, with people moving to the site from outside the region, justifies inclusion of these additional predicted expenditures in the EIFS analysis.

Change in Local Expenditures reflects the summation of estimated expenditures under reuse during a year(s) of maximum economic activity (peak construction year(s)), plus the average annual expenditures for site preparation and rehabilitation over the 20-year build out period, new-to-ROI household expenditures, and tourism expenditures, less the annual Fort Monroe expenditures lost from base closure and expenditures not staying within the ROI (i.e. going to Fort Eustis).

Change in Civilian Employment

Civilian employment was determined by the data cited in the BRAC Commission Report (U.S. DoD 2005), and includes 2,171 civilian and government contractor jobs on Fort Monroe. About 21 percent of the total jobs at Fort Monroe will either be lost or moved outside the ROI to Fort Knox, and the same ratio has been applied to conservatively determine the amount of civilian jobs that would leave the ROI (a total of 456 jobs). Total job losses from Fort Monroe closure reflect the change in civilian employment under Caretaker Status.

Reuse scenario employment projections (as outlined in Section 3.3) were used to derive changes in civilian employment under the three reuse scenarios. Change in civilian employment during year(s) of maximum economic growth reflects the total number of civilian jobs eliminated (21 percent of those cited in the BRAC Commission Report) due to base closure, plus jobs created due to construction and redevelopment under the three reuse scenarios, and is estimated to be 770 under the Upper Bracket, 361 under the Middle Bracket, and -293 under the Lower Bracket scenarios.

Average Income of Affected Civilians

Payroll data provided by the installation (Roberts 2008) and the number of civilian/contractor jobs at Fort Monroe (U.S. DoD 2005) were used to calculate the average wage for Fort Monroe civilian staff, estimated to be $55,327. To determine the average wage generated by construction and reuse, the weighted average wage for each type of employment generated by reuse was used in addition to the wage for jobs lost through Fort Monroe closure.

Percent Expected to Relocate

The percent expected to relocate is uncertain. For the EIFS model runs, 20 percent were conservatively assumed to relocate, given the level of unemployment and work force in the ROI, and given that 2,217 Fort Monroe employees (more than 50 percent) will be restationed at Fort Eustis, which is located only 18 miles from Fort Monroe.

Change in Military Employment

According to the BRAC Commission Report (U.S. DoD 2005), Fort Monroe will lose a total of 1,393 military jobs with the base closure, but many of these jobs will be staying within the ROI. To be conservative, it was estimated that 21 percent of Fort Monroe military employees will not be relocated to Fort Eustis or elsewhere within the ROI (FMFADA 2008).

Average Income of Affected Military

Payroll data provided by the installation (Roberts 2008) and the number of military jobs at Fort Monroe (U.S. DoD 2005) were used to calculate average wages for Fort Monroe military staff, estimated to be $60,568.

Percent of Military Living on Post

Approximately 15 percent of military employees are estimated to be living on post (Edwards 2008).

EIFS REPORT

PROJECT NAME

Fort Monroe 2005 BRAC Caretaker Status

STUDY AREA

37053 Currituck, NC	51650 Hampton, VA	51199 York, VA
51073 Gloucester, VA	51700 Newport News, VA	51550 Chesapeake, VA
51093 Isle of Wight, VA	51710 Norfolk, VA	51810 Virginia Beach, VA
51095 James City, VA	51735 Poquoson, VA	51830 Williamsburg, VA
51115 Mathews, VA	51740 Portsmouth, VA	
51181 Surry, VA	51800 Suffolk, VA	

FORECAST INPUT

Change In Local Expenditures	($27,440,000)
Change In Civilian Employment	-456
Average Income of Affected Civilian	$55,327
Percent Expected to Relocate	20
Change In Military Employment	-295
Average Income of Affected Military	$60,568
Percent of Military Living On Post	15

FORECAST OUTPUT

Employment Multiplier	3.23	
Income Multiplier	3.23	
Sales Volume - Direct	($55,890,580)	
Sales Volume - Induced	($124,636,000)	
Sales Volume - Total	($180,526,600)	-0.55%
Income - Direct	($50,466,920)	
Income - Induced)	($33,476,630)	
Income - Total(place of work)	($83,943,560)	-0.24%
Employment - Direct	-1121	
Employment - Induced	-825	
Employment - Total	-1947	-0.21%
Local Population	-962	
Local Off-base Population	-851	-0.06%

RTV SUMMARY

	Sales Volume	Income	Employment	Population
Positive RTV	10.91 %	10.6 %	2.79 %	1.71 %
Negative RTV	-6.99 %	-5.71 %	-2.97 %	-0.69 %

EIFS REPORT

PROJECT NAME

Fort Monroe 2005 BRAC-NEPA - Upper Bracket Economic Reuse Scenario

STUDY AREA

37053 Currituck, NC	51650 Hampton, VA	51199 York, VA
51073 Gloucester, VA	51700 Newport News, VA	51550 Chesapeake, VA
51093 Isle of Wight, VA	51710 Norfolk, VA	51810 Virginia Beach, VA
51095 James City, VA	51735 Poquoson, VA	51830 Williamsburg, VA
51115 Mathews, VA	51740 Portsmouth, VA	
1181 Surry, VA	51800 Suffolk, VA	

FORECAST INPUT

Change In Local Expenditures	$222,800,000
Change In Civilian Employment	770
Average Income of Affected Civilian	$43,250
Percent Expected to Relocate	20
Change In Military Employment	-295
Average Income of Affected Military	$60,568
Percent of Military Living On-post	15

FORECAST OUTPUT

Employment Multiplier	3.23	
Income Multiplier	3.23	
Sales Volume - Direct	$241,408,800	
Sales Volume - Induced	$538,341,800	
Sales Volume - Total	$779,750,600	2.36%
Income - Direct	$75,277,960	
Income - Induced)	$144,596,000	
Income - Total(place of work)	$219,874,000	0.62%
Employment - Direct	2074	
Employment - Induced	3566	
Employment - Total	5639	0.61%
Local Population	-351	
Local Off-base Population	-241	-0.02%

RTV SUMMARY

	Sales Volume	Income	Employment	Population
Positive RTV	10.91 %	10.6 %	2.79 %	1.71 %
Negative RTV	-6.99 %	-5.71 %	-2.97 %	-0.69 %

EIFS REPORT

PROJECT NAME

Fort Monroe 2005 BRAC-NEPA - Middle Bracket Economic Reuse Scenario

STUDY AREA

37053 Currituck, NC	51650 Hampton, VA	51199 York, VA
51073 Gloucester, VA	51700 Newport News, VA	51550 Chesapeake, VA
51093 Isle of Wight, VA	51710 Norfolk, VA	51810 Virginia Beach, VA
51095 James City, VA	51735 Poquoson, VA	51830 Williamsburg, VA
51115 Mathews, VA	51740 Portsmouth, VA	
181 Surry, VA	51800 Suffolk, VA	

FORECAST INPUT

Change In Local Expenditures	$168,000,000
Change In Civilian Employment	361
Average Income of Affected Civilian	$43,250
Percent Expected to Relocate	20
Change In Military Employment	-295
Average Income of Affected Military	$60,568

FORECAST OUTPUT

Employment Multiplier	3.23	
Income Multiplier	3.23	
Sales Volume - Direct	$172,386,700	
Sales Volume - Induced	$384,422,300	
Sales Volume - Total	$556,809,000	1.69%
Income - Direct	$42,869,690	
Income - Induced)	$103,254,000	
Income - Total(place of work)	$146,123,700	0.41%
Employment - Direct	1208	
Employment - Induced	2546	
Employment - Total	3754	0.41%
Local Population	-555	
Local Off-base Population	-445	-0.04%

RTV SUMMARY

	Sales Volume	Income	Employment	Population
Positive RTV	10.91 %	10.6 %	2.79 %	1.71 %
Negative RTV	-6.99 %	-5.71 %	-2.97 %	-0.69 %

1

EIFS REPORT

PROJECT NAME

Fort Monroe 2005 BRAC-NEPA - Lower Bracket Economic Reuse Scenario

STUDY AREA

37053 Currituck, NC	51650 Hampton, VA	51199 York, VA
51073 Gloucester, VA	51700 Newport News, VA	51550 Chesapeake, VA
51093 Isle of Wight, VA	51710 Norfolk, VA	51810 Virginia Beach, VA
51095 James City, VA	51735 Poquoson, VA	51830 Williamsburg, VA
51115 Mathews, VA	51740 Portsmouth, VA	
181 Surry, VA	51800 Suffolk, VA	

FORECAST INPUT

Change In Local Expenditures	$79,000,000
Change In Civilian Employment	-293
Average Income of Affected Civilian	$43,250
Percent Expected to Relocate	20
Change In Military Employment	-295
Average Income of Affected Military	$60,568

FORECAST OUTPUT

Employment Multiplier	3.23	
Income Multiplier	3.23	
Sales Volume - Direct	$60,645,140	
Sales Volume - Induced	$135,238,700	
Sales Volume - Total	$195,883,800	0.59%
Income - Direct	($9,320,785)	
Income - Induced)	$36,324,460	
Income - Total(place of work)	$27,003,702	0.08%
Employment - Direct	-186	
Employment - Induced	896	
Employment - Total	709	0.08%
Local Population	-880	
Local Off-base Population	-770	-0.06%

RTV SUMMARY

	Sales Volume	Income	Employment	Population
Positive RTV	10.91 %	10.6 %	2.79 %	1.71 %
Negative RTV	-6.99 %	-5.71 %	-2.97 %	-0.69 %

APPENDIX H **TRANSPORTATION STUDIES**

This page intentionally left blank

Fort Monroe EIS

Traffic Impact Analysis

Prepared for:

Marstel Day

Prepared by:

Kimley-Horn and Associates, Inc.

July 2009

Traffic Impact Analysis
for
Fort Monroe EIS
Hampton, Virginia
(Middle Bracket Intensity)

Prepared for:
Marstel-Day, LLC

Prepared by:
Kimley-Horn and Associates, Inc.
Suite 500
4500 Main Street
Virginia Beach, Virginia 23462
P: 757.213.8600 F: 757.213.8601

117009001
July 27, 2009

Executive Summary

Fort Monroe, an existing military base, is located on Old Point Comfort where the Hampton Roads Harbor and Chesapeake Bay meet in Hampton, Virginia. The 570 acre peninsula is a U.S. Army installation with a distinct cultural and military history. Today, the Fort serves as both residence and workplace for the military population, while also attracting many tourists with its historic sites, recreational facilities, and open shoreline.

Based on recommendations set forth by the Base Realignment and Closure Commission (BRAC), Fort Monroe will be vacated by the Army by 2011. In order to promote the proper development and reuse of Fort Monroe, the Fort Monroe Federal Area Development Authority (FMFADA) established a reuse plan to provide the level of mobility needed to protect the historical significance of Fort Monroe, assure the property is open and accessible, and establish a large-scale open park space.

The newly accepted August 2008 FMRP requires the Army to prepare an Environmental Impact Statement (EIS) including an update to the traffic component of the reuse plan. This report has been prepared for submittal to the Army and identifies the traffic impacts associated with the approved FMRP, in addition to requirements necessary for the completion of the EIS.

The proposed reuse of Fort Monroe will increase traffic volumes along the local street network. Analysis illustrated that operations will deteriorate, however adequate overall traffic operations along Mallory Street and Woodland Road can be achieved with recommended transportation infrastructure improvements in conjunction with optimized signal timings. With these improvements, potential queuing at local street intersections providing direct access to/from I-64 are eliminated. A description of the necessary transportation infrastructure improvements to address potential traffic impacts from the Fort Monroe Reuse Plan is outlined below:

Mallory Street/I-64 Westbound Ramps

- Restripe the southbound approach to include an exclusive left-turn lane (250 feet of storage), and a shared through and right-turn lane.
- Construct an exclusive right-turn lane along the westbound approach.

Mallory Street/Mellen Street

- Construct an exclusive left-turn lane along the northbound approach. This recommendation would create dual left-turning movements and provided acceptable LOS at this key intersection.

- Given the location of this key intersection, along with the characteristics of the corridor (i.e. closely spaced cross streets and close proximity between I-64 to the east and Mercury Boulevard to the west), corridor improvements are required beyond the limits of this specific intersection. One such improvement includes widening Mallory Street from two to four lanes between the I-64 interchange and Mercury Boulevard.

Woodland Road/I-64 Westbound Ramps

- Restripe the northbound approach to include an exclusive left-turn lane (200 feet of storage), a shared through and left-turn lane, and an exclusive channelized right-turn lane (yield controlled).

Woodland Road/I-64 Eastbound Ramps/Tyler Street

- Restripe the southbound approach to include two exclusive left-turn lanes (200 feet of storage), an exclusive through lane, and a shared through and right-turn lane.

Table of Contents

1.0 Introduction 1

1.1 Study Area 2
1.2 Existing Conditions 5
1.3 Existing Traffic 8

2.0 Future Traffic Assumptions 10

2.1 Trip Generation 10
2.1.1 Residential Trip Generation 12
2.1.2 Office Trip Generation 13
2.1.3 Lodging Trip Generation 14
2.1.4 Commercial Trip Generation 16
2.1.5 Tourism Trip Generation 17
2.1.6 Total Trip Generation 21
2.2 Traffic Distribution 22
2.3 Site Access and Traffic Assignment 27
2.4 Projected Traffic Volumes 27

3.0 Traffic Analysis 32

3.1 Mallory Street/I-64 EB Off-Ramp 33
3.2 Mallory Street /I-64 WB Off-Ramp/Segar Street 34
3.3 Mallory Street/Mellen Street 35
3.4 Mallory Street/County Street 37
3.5 Mallory Street/Mercury Boulevard 38
3.6 Mallory Street/Atlantic Avenue 38
3.7 Woodland Road/County Street 39
3.8 Settlers Landing Road/I-64 WB On- and Off-Ramp 40
3.9 Settlers Landing Road/Tyler Street/I-64 EB Off-Ramp 42
3.10 Internal Fort Monroe Street Network (Entry Gate) 44

4.0 Conclusions and Recommendations 46

Appendix 49

Appendix A: Fort Monroe Management Zones
Appendix B: Existing Traffic Counts
Appendix C: Traffic Analysis: Mallory Street/I-64 EB Off-Ramp
Appendix D: Traffic Analysis: Mallory Street/I-64 WB Off-Ramp/Segar Street
Appendix E: Traffic Analysis: Mallory Street/Mellen Street
Appendix F: Traffic Analysis: Mallory Street/County Street
Appendix G: Traffic Analysis: Mallory Street/Mercury Boulevard
Appendix H: Traffic Analysis: Mallory Street/Atlantic Avenue
Appendix I: Traffic Analysis: Woodland Road/County Street
Appendix J: Traffic Analysis: Settlers Landing Road/I-64 WB On- and Off-Ramp
Appendix K: Traffic Analysis: Settlers Landing Road/Tyler Street/I-64 EB Off-Ramp

1.0 Introduction

Fort Monroe, an existing military base, is located on Old Point Comfort where the Hampton Roads Harbor and Chesapeake Bay meet in Hampton, Virginia. The 570 acre peninsula is a U.S. Army installation with a distinct culture and history. Today, the Fort serves as both residence and workplace for the military population, while also attracting many tourists with its historic sites, recreational facilities, and open shoreline.

In 2005, the Base Realignment and Closure Commission (BRAC) set forth recommendations to have Fort Monroe closed and vacated by 2011, with much of the land being reverted to the Commonwealth of Virginia. In 2007, after the final decision was made to close Fort Monroe, the Fort Monroe Federal Area Development Authority (FMFADA) was created to promote the proper development and reuse of Fort Monroe. On August 20, 2008, the proposed reuse plan was officially adopted and signed by Virginia Governor Tim Kaine.

After the military base is vacated, every effort to maintain Fort Monroe's historic quality will be made. To assist with this, the Fort Monroe Reuse Plan (FMRP) will be used to guide redevelopment. This plan was developed with public input from citizens, stakeholders, and leaders in the community to determine how the vacated land would be reused. Mobility is a critical factor in future development opportunities at Fort Monroe. The ability to move people and resources within this highly historic and isolated area with varying land uses is the key element in creating positive experiences for residents, commuters, area consumers, and tourists. As part of the FMRP, traffic flow into and out of the area was evaluated to identify the level of mobility needed to support redevelopment of surrounding lands, preserve historical significance, and improve the access to the recreational opportunities that exist on Fort Monroe. The FMRP listed the following three primary transportation goals:

1. Restructure the entrance to Fort Monroe to serve multiple users and land uses that will provide adequate capacity to support the proposed development and allow for enhanced access for emergency vehicles or evacuations.
2. Establish an identity for certain areas within the Fort and provide clear access for the variety of users that will enjoy the various attributes.
3. Provide key transportation improvements that will support future economic vitality and enhance quality of life within the area.

While these principal goals and objectives have not changed from the initial 2006 reuse study, the newly accepted August 2008 FMRP requires the Army to prepare an Environmental Impact Statement (EIS) including an update to the traffic component of the reuse plan. This report has been prepared for submittal to the Army and identifies the traffic impacts associated with the approved FMRP under a middle bracket intensity level of development, in addition to requirements necessary for the completion of the EIS. Assumptions regarding trip generation, trip distribution, background traffic growth, access, and site traffic assignments have been reviewed and agreed upon by all stakeholders for this project.

1.1 Study Area

The study area for this analysis includes the following roadways and intersections:

Roadways (External to Fort Monroe):

- Mallory Street
- Woodland Road/Settlers Landing Road
- Mellen Street
- County Street
- Mercury Boulevard
- Atlantic Avenue
- Segar Street (at I-64 WB Ramps along Mallory Street)
- Tyler Street (at I-64 EB Ramps along Woodland/Settlers Landing Road)

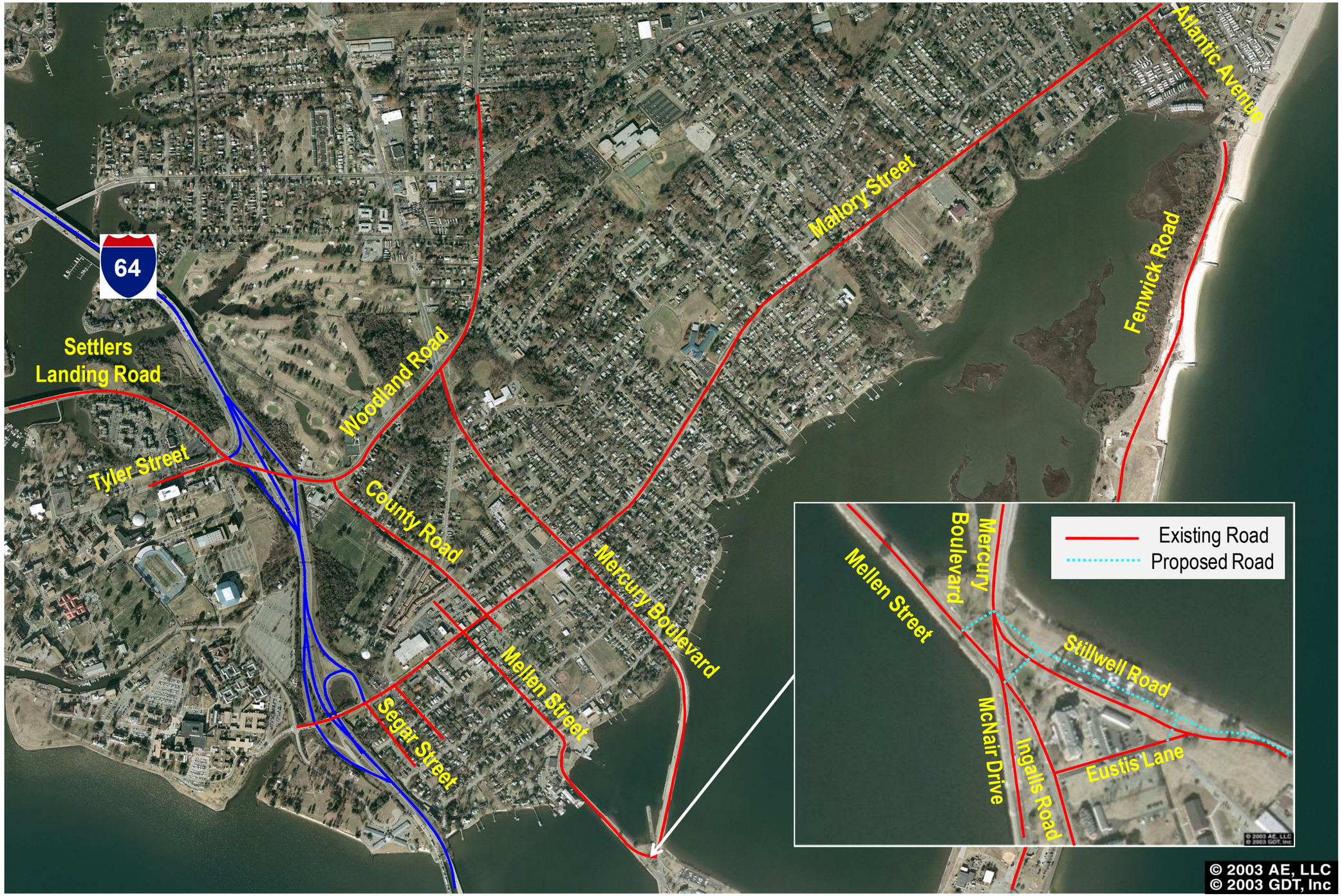
Roadways (Internal to Fort Monroe):

- Ingalls Road
- Stillwell Road
- Eustis Lane
- McNair Drive
- Fenwick Road

Intersections:

- Mallory Street/I-64 EB On-/Off-Ramps (signalized)
- Mallory Street/I-64 WB On-/Off-Ramps/Segar Street (signalized)
- Mallory Street/Mellen Street (signalized)
- Mallory Street/County Street (signalized)
- Mallory Street/Mercury Boulevard (signalized)
- Mallory Street/Atlantic Avenue (unsignalized)
- Woodland Road/County Street (signalized)
- Woodland Road/I-64 WB Ramps (signalized)
- Settlers Landing Road/I-64 EB Off-Ramp/Tyler Street (signalized)
- Ingalls Road/Mellen Road (unsignalized)
- Ingalls Road/Eustis Lane (signalized)
- Stillwell Road/Mercury Boulevard (unsignalized)
- Stillwell Road/Eustis Lane (unsignalized)

Study area intersections were identified through conversations with FMFADA and VDOT. Currently, Fort Monroe has two access points along Mellen Street and Mercury Boulevard which join at the main gate. When redevelopment occurs, the main gate will be reconfigured to provide two independent roadways accessing the Fort. This will improve accessibility, as well as emergency response times. In addition, a third proposed access point will provide a northern connection from Fenwick Road to the intersection of Mallory Street and Atlantic Avenue. **Figure 1** illustrates the Fort Monroe study area in more detail.



NOT TO SCALE

Kimley-Horn and Associates, Inc.

Fort Monroe EIS
Traffic Analysis
Hampton, Virginia

Study Area

FIGURE 1

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

1.2 Existing Conditions

As seen in **Figure 1**, Mallory Street, Woodland/Settlers Landing Road, Mellen Street, County Street, and Mercury Boulevard are the primary roadways in the study area. Each facility traverses the City of Hampton, with Mallory Street providing an east/west connection between I-64 and Downtown Hampton/Phoebus/Buckroe. Woodland Road/Settlers Landing Road extends east/west and provides connections to the City of Newport News and Hampton University to the west and various Hampton residential neighborhoods to the east. Mellen Street and County Street extend north/south and provide connections between Fort Monroe, Mallory Street, and Woodland/Settlers Landing Road. Mercury Boulevard extends north/south through the study area, but is oriented east/west along its remaining length. Mercury Boulevard provides connections to the City of Smithfield and Isle of Wight to the west and Fort Monroe to the east. The transportation system in the vicinity of Fort Monroe is generally well-connected, and Mallory Street and Woodland/Settlers Landing Road both have an interchange with Interstate 64. Pedestrian activity is generally heavy along Mallory Street and Woodland/Settlers Landing Road during both weekday and weekend peaks.

Figure 2 depicts the existing roadway geometry and operations for the study intersections. The following provides a short description of existing roadway characteristics of each facility:

- **Mallory Street** is a two-lane roadway between I-64 and Mercury Boulevard. East of Mercury Boulevard, Mallory Street becomes a four-lane divided roadway. Along both segments, the posted speed limit is 45 miles per hour (mph). Traffic counts provided by the City of Hampton indicate that in 2007, Mallory Street was carrying approximately 9,300 vehicles per day (vpd) in the vicinity of Fort Monroe.

- **Woodland/Settlers Landing Road** is a four-lane, median divided roadway with a posted speed limit of 35 mph. Traffic counts provided by the City of Hampton indicate that in 2007, Woodland/Settlers Landing Road was carrying approximately 21,900 vpd in the vicinity of Fort Monroe.

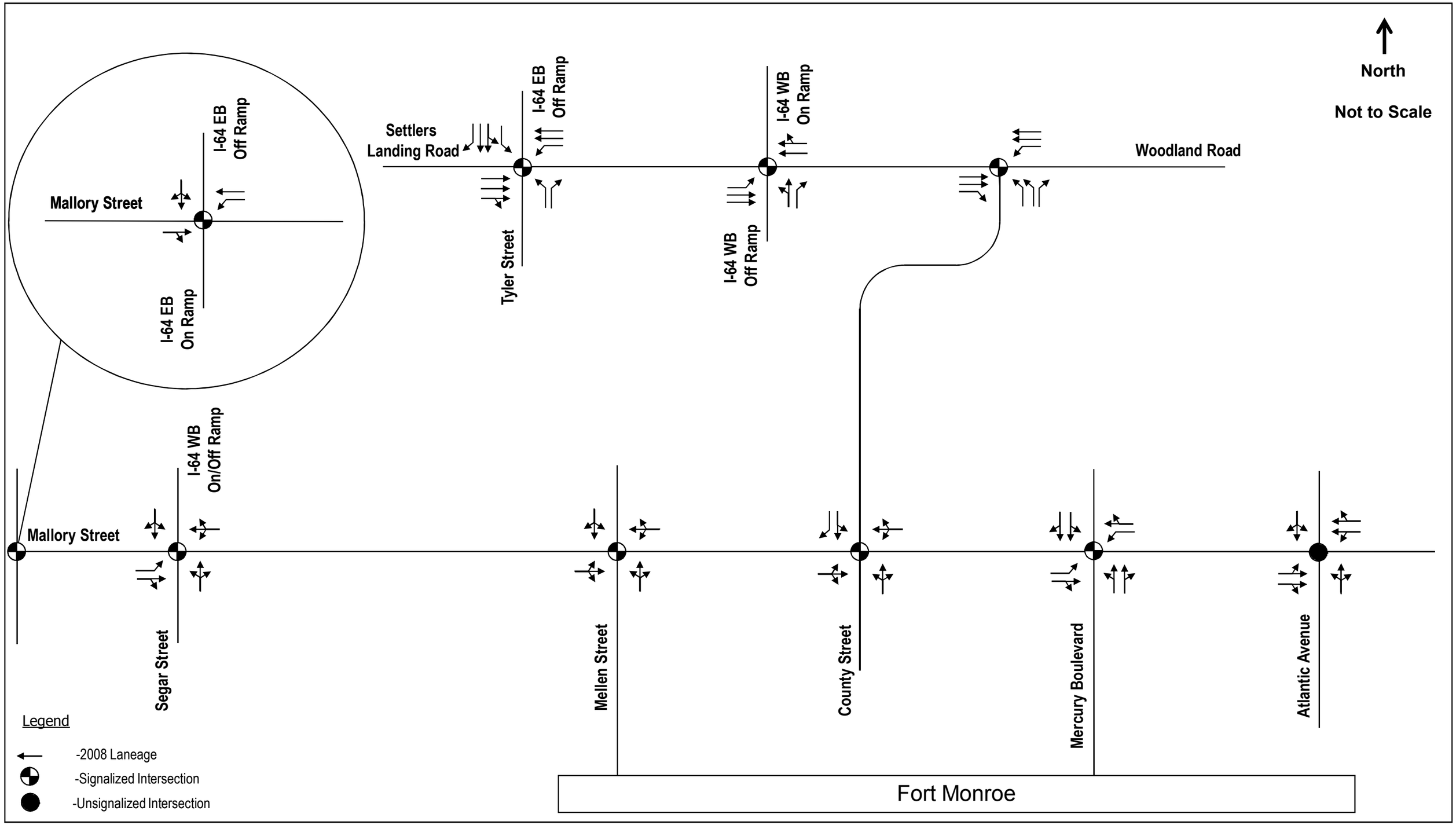
- **Mellen Street** is a two-lane, undivided roadway with a posted speed limit of 35 mph. Traffic counts provided by the City of Hampton indicate that in 2007, Mellen Street was carrying approximately 5,500 vpd in the vicinity of Fort Monroe.

- **County Street** is a three-lane, undivided roadway with a posted speed limit of 35 mph. The southbound direction has two travel lanes, with the outside lane becoming an exclusive right-

turn lane at Mallory Street. The northbound direction has only one travel lane. Traffic counts provided by the City of Hampton indicate that in 2006, County Street was carrying approximately 5,300 vpd in the vicinity of Fort Monroe.

- **Mercury Boulevard** is a four-lane, undivided roadway with a posted speed limit of 45 mph between the Fort Monroe main gate and Old Buckroe Road. North of Old Buckroe Road, Mercury Boulevard becomes a 4-lane, median divided roadway. Traffic counts provided by the City of Hampton indicate that in 2007, Mercury Boulevard was carrying approximately 14,300 vpd in the vicinity of Fort Monroe and 53,400 vpd at a location approximately 4.0 miles north of Mallory Street.

Land uses within Fort Monroe currently include residential (single family, townhouse, and apartment), office (general and medical), lodging, commercial, tourism, and a few community churches. External to Fort Monroe, there are three distinct neighborhoods – Downtown Hampton, Buckroe, and Phoebus. Land uses within these neighborhoods include primarily residential, specialty retail, neighborhood shops, and small restaurants.



Kimley-Horn and Associates, Inc.

Fort Monroe EIS
Traffic Analysis
Hampton, Virginia

Existing Laneage

FIGURE
2

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

1.3 Existing Traffic

KHA obtained average daily traffic (ADT) and turning movement count (TMC) data at each of the study area intersections. ADT data was collected for seven days along each interchange ramp at Mallory Street and Woodland/Settlers Landing Road in late October/early November of 2008. TMC data was obtained from a combination of manual counts and data provided in the Phoebus Neighborhood Planning Study.

In August 2006, KHA analyzed 5 of the 9 external intersections included in this study as part of the Phoebus Neighborhood Planning Study. Since the Phoebus Neighborhood Planning Study had been recently completed, morning and evening peak hour turning movement volumes from the following intersections were used in this study:

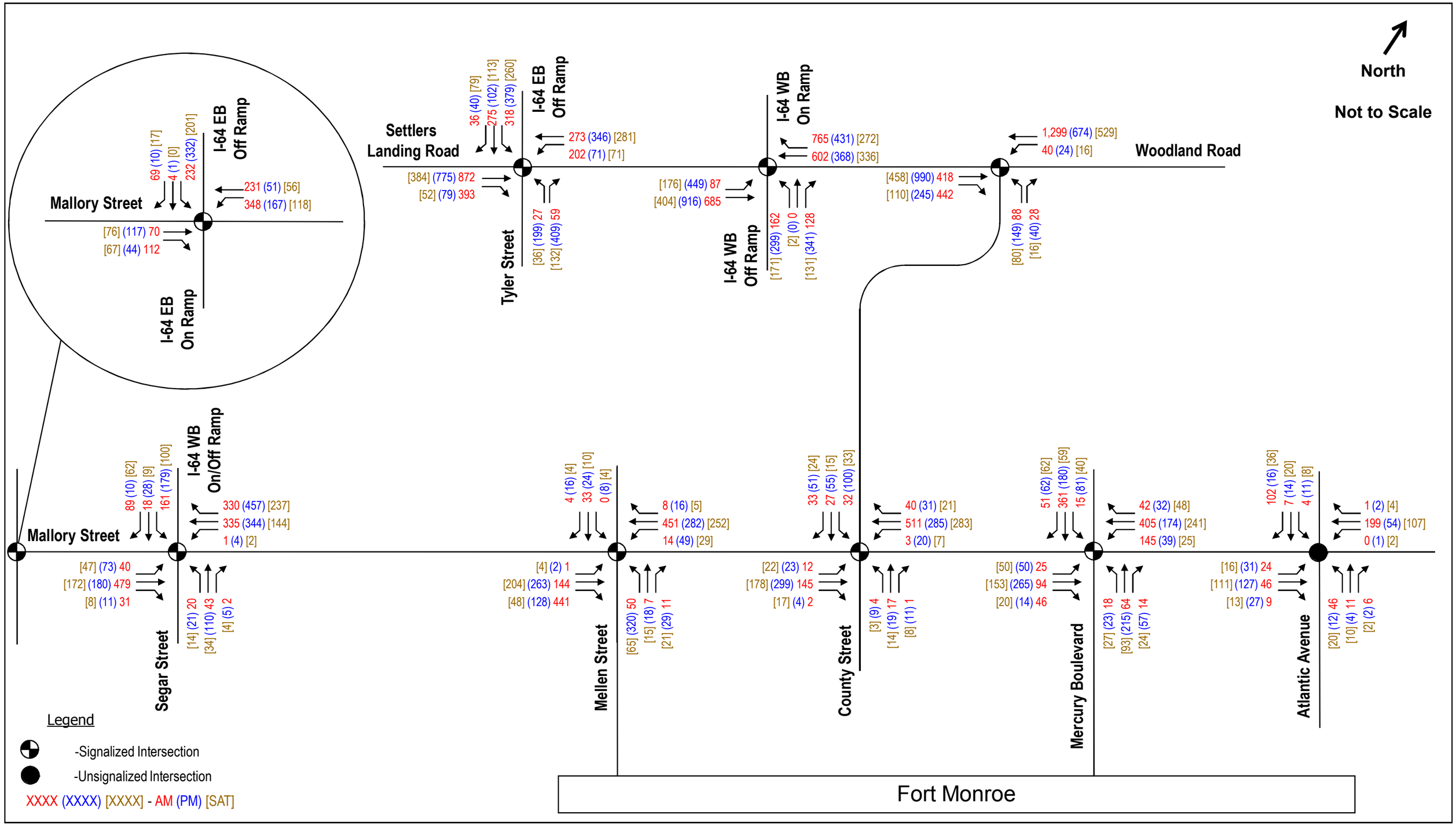
- Mallory Street/I-64 EB On- and Off-Ramps
- Mallory Street/I-64 WB On- and Off-Ramps/Segar Street
- Mallory Street/Mellen Street
- Mallory Street/County Street
- Mallory Street/Mercury Boulevard

Weekday morning and evening peak hour turning movement counts were performed by KHA at the remaining four study area intersections:

- Mallory Street/Atlantic Avenue - October 30, 2008 (AM) and October 29, 2008 (PM)
- Woodland Road/County Street - October 28, 2008 (AM and PM)
- Woodland Road/I-64 WB On- and Off-Ramps - October 29, 2008 (AM and PM)
- Settlers Landing Road/I-64 EB Off-Ramp/Tyler Street - November 5, 2008 (AM and PM)

KHA performed Saturday peak hour turning movement counts for all 9 study area intersections on November 8, 2008.

Study peak hour turning movement volumes are shown in **Figure 3.**



Kimley-Horn and Associates, Inc.

Fort Monroe EIS
Traffic Analysis
Hampton, Virginia

Existing 2008 Turning Movement Volumes

FIGURE
3

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

2.0 Future Traffic Assumptions

All future traffic assumptions, including trip generation, distribution, and background growth rates, were reviewed, discussed, and agreed upon by all stakeholders at the December 12, 2008 traffic assumptions stakeholder meeting. The stakeholders included representatives from the US Army, City of Hampton, Virginia Department of Transportation, and the Hampton Roads Planning District Commission (HRPDC). HRPDC representatives were not in attendance at the meeting; however provided comments on the meeting material.

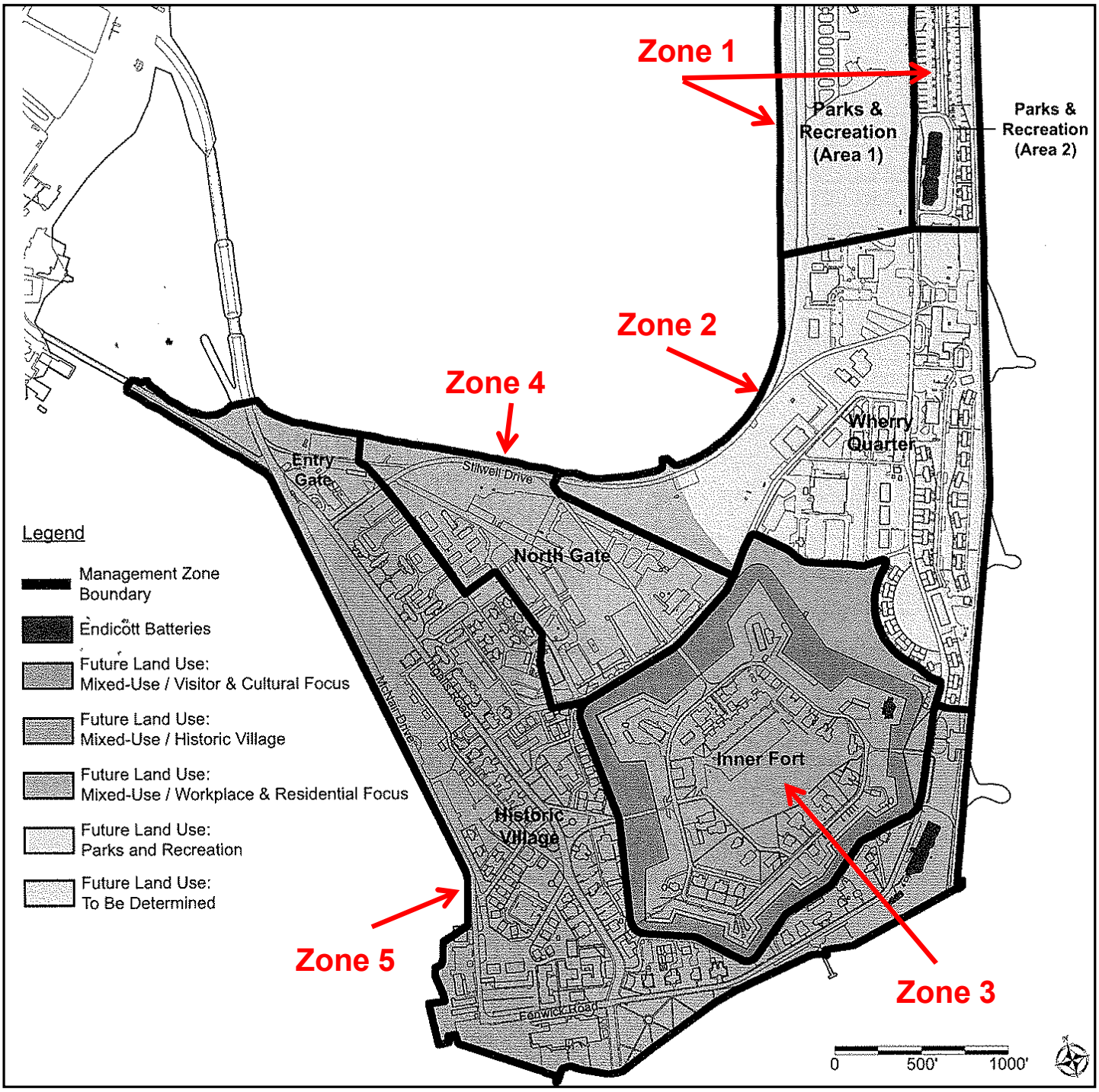
2.1 Trip Generation

The traffic generation potential for the adopted reuse of Fort Monroe is defined as the net difference in the existing and proposed trips at Fort Monroe. The trip generation was determined using traffic generation rates published in *Trip Generation* (Institute of Transportation Engineers [ITE], 7th Edition, 2003) for the AM, PM and Saturday peak hours. Trip generations were calculated for all existing and proposed land uses in Fort Monroe, which include residential, office, commercial, lodging, and tourism components. Potential trip generations were calculated on square footages of existing building and potential reuse opportunities provided by the FMFADA. Several possible uses were identified for each existing building, however for the purposes of this study, higher traffic generators were assumed in order to reflect worst case traffic impacts.

Proposed land reuses were based upon guidelines set forth in the FMFADA programmatic agreement, which outlines the proper reuse for Fort Monroe based upon the following five (5) distinct management zones, as shown in **Figure 4:**

- Zone 1 – Parks and Recreation
- Zone 2 – Wherry Quarter
- Zone 3 – Inner Fort
- Zone 4 – North Gate
- Zone 5 – Historic Village/Entry Gate

Each of these zones has a distinct set of criteria for acceptable demolition, preservation, and reuse of existing structures, as well as new development. Therefore, the trip generation for each use was summarized for each management zone.



Kimley-Horn and Associates, Inc.

Fort Monroe EIS
Traffic Analysis
Hampton, Virginia

Fort Monroe Reuse Management Zones

FIGURE **4**

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

2.1.1 Residential Trip Generation

The residential trip generation included single family, apartment, townhouse, and detached senior adult housing units. In the 2008 Fort Monroe Reuse Plan, the Fort has the potential to accommodate 1,025 residential units excluding Wherry Quarter; however, knowing that Wherry Quarter will be reused, it was assumed that approximately 275 additional residential units would be present, bringing the overall total of residential units on Fort Monroe to approximately 1,300. All stakeholders agreed that this estimate and methodology was conservative, yet acceptable.

The 2008 Fort Monroe Reuse Plan does not specifically identify a proposed number of age restricted housing units, however given the project demographics and cost of housing, it is anticipated that age restricted housing will be a significant residential component. Through discussions with stakeholders at the traffic assumptions meeting, 25% of the total proposed residential units (25% of 1,300, or 325 units) would be classified as age restricted housing. Of these 325 units, 133 are included in Zone 5 at the Chamberlain, resulting in a balance of 192 units which will be allocated to Zone 2 – Wherry Quarter. The remaining residential units allocated to Wherry Quarter were categorized as apartments.

Within multi-use developments it is common to have several complementary land uses in close proximity, meaning that trips among these land uses remain internal to the site and do not use the external roadway network. When this type of trip pattern occurs, it is referred to as internal capture. Given the nature and location of Fort Monroe, it is anticipated that internal capture exists between residential and commercial land uses. Therefore, a reduction in the total number of external trips was made to both of these land uses. The standard VDOT internal capture rate is 15%, however given the location and population makeup of Fort Monroe, a 15% internal capture rate seemed low, and an increase to 20% was suggested. All stakeholders agreed that an internal capture rate of 20% was conservative, yet appropriate. Therefore, a 20% reduction in residential trips was applied to both residential and commercial land uses. **Table 1** summarizes the residential trip generation.

Table 1: Residential Trip Generation

	Fort Monroe Trip Generation Residential Component (with 20% Internal Capture Reduction)										
PROPOSED	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	217	2	9	11	15	8	23	4	4	8
	ZONE 2	2,034	36	107	143	117	67	184	75	75	150
	ZONE 3	845	15	56	71	54	28	82	50	47	97
	ZONE 4	1,365	21	84	105	83	45	128	54	54	108
	ZONE 5	2,318	38	130	168	140	76	216	97	91	188
	TOTAL	**6,779**	**112**	**386**	**498**	**409**	**224**	**633**	**280**	**271**	**551**
EXISTING	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	217	2	9	11	15	8	23	4	4	8
	ZONE 2	634	11	41	52	40	22	62	27	26	53
	ZONE 3	325	6	22	28	23	11	34	28	24	52
	ZONE 4	0	0	0	0	0	0	0	0	0	0
	ZONE 5	1,485	25	76	101	90	50	140	62	57	119
	TOTAL	**2,661**	**44**	**148**	**192**	**168**	**91**	**259**	**121**	**111**	**232**
DIFFERENCE	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	0	0	0	0	0	0	0	0	0	0
	ZONE 2	1,400	25	66	91	77	45	122	48	49	97
	ZONE 3	520	9	34	43	31	17	48	22	23	45
	ZONE 4	1,365	21	84	105	83	45	128	54	54	108
	ZONE 5	833	13	54	67	50	26	76	35	34	69
	TOTAL	**4,118**	**68**	**238**	**306**	**241**	**133**	**374**	**159**	**160**	**319**

The anticipated residential developments on Fort Monroe have the potential to generate 4,118 total daily trips, approximately 306 of those occurring in the AM peak hour, 374 in the PM peak hour, and 319 in the Saturday peak hour.

2.1.2 Office Trip Generation

The office trip generation included both medical and general office uses. A significant portion of existing office space will be converted to other land uses in the Fort Monroe Reuse Plan, resulting in negative values in **Table 2**.

Table 2: Office Trip Generation

	Fort Monroe Trip Generation Office Component										
PROPOSED	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	0	0	0	0	0	0	0	0	0	0
	ZONE 2	1,278	158	21	179	31	154	185	21	18	39
	ZONE 3	1,525	189	26	215	36	178	214	26	23	49
	ZONE 4	1,287	159	22	181	32	154	186	21	18	39
	ZONE 5	741	90	12	102	22	109	131	10	9	19
	TOTAL	**4,831**	**596**	**81**	**677**	**121**	**595**	**716**	**78**	**68**	**146**
EXISTING	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	83	9	1	10	14	68	82	1	0	1
	ZONE 2	1,582	197	27	224	37	182	219	28	23	51
	ZONE 3	2,779	354	48	402	63	306	369	57	49	106
	ZONE 4	2,190	276	38	314	50	242	292	42	36	78
	ZONE 5	3,442	442	60	502	78	385	463	74	66	140
	TOTAL	**10,076**	**1,278**	**174**	**1,452**	**242**	**1,183**	**1,425**	**202**	**174**	**376**
DIFFERENCE	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	-83	-9	-1	-10	-14	-68	-82	-1	0	-1
	ZONE 2	-304	-39	-6	-45	-6	-28	-34	-7	-5	-12
	ZONE 3	-1,254	-165	-22	-187	-27	-128	-155	-31	-26	-57
	ZONE 4	-903	-117	-16	-133	-18	-88	-106	-21	-18	-39
	ZONE 5	-2,701	-352	-48	-400	-56	-276	-332	-64	-57	-121
	TOTAL	**-5,245**	**-682**	**-93**	**-775**	**-121**	**-588**	**-709**	**-124**	**-106**	**-230**

The anticipated office development on Fort Monroe will be much less than today under the proposed Reuse Plan. Therefore, the office component will generate approximately, 5,245 less total daily trips, 775 less in the AM peak hour, 709 less in the PM peak hour, and 230 less in the Saturday peak hour.

2.1.3 Lodging Trip Generation

The lodging trip generation for the Reuse Plan included only a single hotel land use. The proposed Reuse Plan only designated one building to provide lodging (Armistead Hall), however there is potential for a 160 room hotel, similar to the Sunderling Hotel in the Outer Banks of North Carolina. This additional hotel may be located in Zone 4, Wherry Quarter. Since the development of Wherry Quarter is undetermined in the FMFADA Reuse Plan, there are numerous possibilities which could occur in the future. One option, as previously discussed, is that only residential housing would be constructed in Wherry Quarter, consistent with the current land use. However, a second option for Wherry Quarter is

to include a 160 room hotel. Option 2 would have less residential units in Wherry Quarter than Option 1, to accommodate the hotel. Assuming a room size similar to the Chamberlain Hotel, approximately 237,000 SF would be required. This area would eliminate approximately 151 residential dwelling units. When comparing the trip generation of the hotel with the 151 eliminated residential dwelling units, there is a negligible difference. Therefore, the lodging trip generation, assuming only residential development in Wherry Quarter, is sufficient, and illustrated in **Table 3**.

Table 3: Lodging Trip Generation

	Fort Monroe Trip Generation Lodging Component										
	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
PROPOSED	ZONE 1	0	0	0	0	0	0	0	0	0	0
	ZONE 2	0	0	0	0	0	0	0	0	0	0
	ZONE 3	0	0	0	0	0	0	0	0	0	0
	ZONE 4	0	0	0	0	0	0	0	0	0	0
	ZONE 5	123	2	2	4	5	4	9	8	7	15
	TOTAL	**123**	**2**	**2**	**4**	**5**	**4**	**9**	**8**	**7**	**15**
EXISTING	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	0	0	0	0	0	0	0	0	0	0
	ZONE 2	0	0	0	0	0	0	0	0	0	0
	ZONE 3	0	0	0	0	0	0	0	0	0	0
	ZONE 4	0	0	0	0	0	0	0	0	0	0
	ZONE 5	123	2	2	4	5	4	9	8	7	15
	TOTAL	**123**	**2**	**2**	**4**	**5**	**4**	**9**	**8**	**7**	**15**
DIFFERENCE	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	0	0	0	0	0	0	0	0	0	0
	ZONE 2	0	0	0	0	0	0	0	0	0	0
	ZONE 3	0	0	0	0	0	0	0	0	0	0
	ZONE 4	0	0	0	0	0	0	0	0	0	0
	ZONE 5	0	0	0	0	0	0	0	0	0	0
	TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

The only structure identified for lodging in the FMFADA reuse plan is Armistead Hall, which is currently used for VIP quarters. Since this structure will serve the same purpose in the reuse, there are no additional trips generated by lodging beyond existing conditions. Additionally, a proposed hotel would generate no more additional trips than if there were residential dwelling units instead.

2.1.4 Commercial Trip Generation

The commercial trip generation included the greatest range of possible uses, including shopping center, specialty retail, church, warehouse, library, daycare, recreation center, bank, marina, auto garage, bowling alley, manufacturing, and truck terminal land uses. In the 2008 FMRP, the Fort has the potential to accommodate approximately 740,000 square feet (SF) of non-residential land uses, however due to the amount of developable space available in the North Gate region; the traffic study assumed that additional commercial development is possible. Based on the amount of land available, approximately 260,000 SF of additional commercial uses could be developed, bringing the overall total area of non-residential uses to approximately 1,000,000 SF. Given the restriction noted in the programmatic agreement, the traffic study assumed that this additional commercial development would occur in the North Gate region. For analysis purposes, the study assumes the development would be a commercial shopping center. All stakeholders agreed that this estimate and methodology was conservative, yet acceptable.

As described previously in Section 2.1.1 "Residential Trip Generation", a 20% internal capture rate was applied to the residential trip generation, which was then deducted from the commercial trip generation. This was done to account for internal trips existing between residential and commercial land uses (i.e. these trips never access the external roadway network). The standard VDOT internal capture rate is 15%, however given the location and population makeup of Fort Monroe, a 15% internal capture rate seemed low, and an increase to 20% was suggested. All stakeholders agreed that an internal capture rate of 20% was conservative, yet appropriate. **Table 4** summarizes the overall commercial trip generation.

Table 4: Commercial Trip Generation

	Fort Monroe Trip Generation Commercial Component (with 20% Internal Capture Reduction)										
PROPOSED	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	457	21	12	33	6	24	30	13	13	26
	ZONE 2	3,285	66	23	89	136	181	317	213	202	415
	ZONE 3	3,312	21	1	22	141	158	299	227	206	433
	ZONE 4	12,483	165	91	256	552	609	1,161	830	768	1,598
	ZONE 5	2,947	42	13	55	92	128	220	149	154	303
	TOTAL	**22,484**	**315**	**140**	**455**	**927**	**1,100**	**2,027**	**1,432**	**1,343**	**2,775**
EXISTING	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	459	21	12	33	6	24	30	13	13	26
	ZONE 2	6,220	205	144	349	296	356	652	307	287	594
	ZONE 3	894	7	-3	4	36	42	78	51	42	93
	ZONE 4	195	7	7	14	9	9	18	8	9	17
	ZONE 5	1,862	41	22	63	50	73	123	72	83	155
	TOTAL	**9,630**	**281**	**182**	**463**	**397**	**504**	**901**	**451**	**434**	**885**
DIFFERENCE	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	-2	0	0	0	0	0	0	0	0	0
	ZONE 2	-2,935	-139	-121	-260	-160	-175	-335	-94	-85	-179
	ZONE 3	2,418	14	4	18	105	116	221	176	164	340
	ZONE 4	12,288	158	84	242	543	600	1,143	822	759	1,581
	ZONE 5	1,085	1	-9	-8	42	55	97	77	71	148
	TOTAL	**12,854**	**34**	**-42**	**-8**	**530**	**596**	**1,126**	**981**	**909**	**1,890**

The anticipated commercial development on Fort Monroe will generate approximately 12,854 total daily trips, which results in 8 less trips in the AM peak hour, approximately 1,126 additional in the PM peak hour, and 1,890 additional in the Saturday peak hour. The total morning peak hour generation is negative due to Wherry Quarter (Zone 2) having much more existing commercial amenities today than what is proposed in the reuse plan.

2.1.5 Tourism Trip Generation

The tourism trip generation included two main components – beach/recreation and cultural/history. The 2008 Fort Monroe Reuse Plan estimates approximately 125,000 beach/recreation and 150,000 cultural/history visitors per year in addition to what currently exists. In order to determine the number of peak hour trips generated by the FMRP, assumptions were applied to annual visitation projections to generate monthly, weekly, daily, and eventually peak hour volumes. All assumptions were discussed in

detail in the December 12, 2008 traffic assumptions meeting, where all stakeholders were in concurrence.

A monthly assumption used for both components included the establishment of three equal "calendar seasons" based upon the seasonal impacts on visitor attendance (January – April = Season 1, May – August = Season 2, and September – December = Season 3). Other assumptions which were consistent for both tourism components were that there are 20 weekdays and 4 Saturdays in a typical month and vehicle occupancy is 2 visitors per vehicle. Stakeholders indicated that this occupancy value is conservative, yet acceptable. Given the different nature and attractiveness associated with the two tourism components, individual monthly, weekly, and daily assumptions for each component were discussed with the stakeholders and are summarized below in **Table 5** and **Table 6**.

Table 5: Annual Arrival Percentages by Season

Beach and Recreation Component			
	% Annual Traffic	% Weekday	% Weekend
Season 1	20%	20%	80%
Season 2	60%	40%	60%
Season 3	20%	30%	70%
Cultural and History Component			
	% Annual Traffic	% Weekday	% Weekend
Season 1	33%	70%	30%
Season 2	33%	50%	50%
Season 3	33%	70%	30%

Table 6: Annual Arrival Percentages by Month

Month	Beach and Recreation	Cultural and History
January	2.0%	8.3%
February	3.0%	8.3%
March	5.0%	8.3%
April	10.0%	8.3%
May	15.0%	8.3%
June	15.0%	8.3%
July	15.0%	8.3%
August	15.0%	8.3%
September	10.0%	8.3%
October	5.0%	8.3%
November	3.0%	8.3%
December	2.0%	8.3%

Once the monthly and daily volumes were established by assuming a 20 weekday and 4 Saturday monthly period, peak hour trip generations were derived. To determine the peak hour travel patterns for each component, the ITE trip manual was used to explore similar land uses. For the beach/recreation component, multi-purpose recreation facility and beach park land uses were used. For the cultural/history component, library and national monument land uses were used. Based on the travel patterns for each of the ITE land uses, peak hour travel patterns were established for each component, and are illustrated in **Table 7**.

Table 7: Peak Hour Percentages by Component

Peak Hour Arrival Rates Beach and Recreation			
PEAK HOUR:	% Arriving in Peak Hour		
	JAN-APR	MAY-AUG	SEPT-DEC
AM	3	3	3
PM	6	6	6
SATURDAY	12	12	12
Cultural and History			
PEAK HOUR:	% Arriving in Peak Hour		
	JAN-APR	MAY-AUG	SEPT-DEC
AM	10	10	10
PM	15	15	15
SATURDAY	15	15	15

Unlike beach/recreation trips, cultural/history trips will attract large vehicles, such as school buses, primarily during Seasons 1 and 3 when school is in session. It was assumed that one bus trip per week would occur, carrying approximately 30 visitors. After applying each assumption to the annual projections, the highest monthly peak hour period (June) was chosen to represent the tourism trip generation in the traffic analysis. **Table 8** illustrates the tourism trip generation.

Table 8: Tourism Trip Generation

	Fort Monroe Trip Generation Tourism Component										
	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
PROPOSED	ZONE 1	98	2	1	3	3	3	6	22	22	44
	ZONE 2	90	2	1	3	3	2	5	21	20	41
	ZONE 3	153	8	9	17	12	12	24	30	29	59
	ZONE 4	0	0	0	0	0	0	0	0	0	0
	ZONE 5	0	0	0	0	0	0	0	0	0	0
	TOTAL	**341**	**12**	**11**	**23**	**18**	**17**	**35**	**73**	**71**	**144**
* EXISTING	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	0	0	0	0	0	0	0	0	0	0
	ZONE 2	0	0	0	0	0	0	0	0	0	0
	ZONE 3	0	0	0	0	0	0	0	0	0	0
	ZONE 4	0	0	0	0	0	0	0	0	0	0
	ZONE 5	0	0	0	0	0	0	0	0	0	0
	TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
DIFFERENCE	ZONE	DAILY	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
	ZONE 1	98	2	1	3	3	3	6	22	22	44
	ZONE 2	90	2	1	3	3	2	5	21	20	41
	ZONE 3	153	8	9	17	12	12	24	30	29	59
	ZONE 4	0	0	0	0	0	0	0	0	0	0
	ZONE 5	0	0	0	0	0	0	0	0	0	0
	TOTAL	**341**	**12**	**11**	**23**	**18**	**17**	**35**	**73**	**71**	**144**

** Existing tourism values are unknown*

Using the assumptions outlined above, and agreed to by the stakeholders, the anticipated tourism on Fort Monroe will generate 341 total daily trips, 23 in the AM peak hour, 35 in the PM peak hour, and 144 in the Saturday peak hour.

2.1.6 Total Trip Generation

Before totaling each of the five individual trip generations to obtain the overall final trip distribution, ADT counts were obtained at the main gate to determine how many trips currently enter and exit the facility. Understanding that existing trip generation potential is based on existing square footage and ITE generation rates, the difference in counted and observed volumes at the main gate can be attributed to either internally captured trips between residential and office land uses or variation in land use trip generation rates. Regardless of the reason, and to be conservative in analyzing the impacts of the FMRP on the external local street network, it was assumed that all existing internal trip potential at Fort Monroe would be redistributed back to the local street network.

Based on the existing land uses on Fort Monroe, ITE trip generation indicates that 22,500 trips would be occurring at the gate today, however according to ADT data obtained from the Army, only approximately 10,500 trips are observed, leaving approximately 12,000 trips unaccounted for. To be conservative, it was assumed that all of these daily trips would be redistributed to the local street network in the future scenarios, 50% as residential and 50% as office. **Table 9** illustrates the final trip generation with all residential, office, commercial, lodging, and tourism reuse components, in addition to the internal trips currently unaccounted for at the main gate.

Table 9: Total Fort Monroe Trip Generation

Fort Monroe Trip Generation Total Trip Generation										
		AM			PM			SAT		
COMPONENT	DAILY	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
RESIDENTIAL	4,118	68	238	306	241	133	374	159	160	319
Existing Residential Internal Capture	*5,994*	*64*	*223*	*287*	*382*	*211*	*593*	*314*	*316*	*630*
OFFICE	-5,245	-682	-93	-775	-121	-588	-709	-124	-106	-230
Existing Office Internal Capture	*5,994*	*253*	*34*	*287*	*101*	*492*	*593*	*340*	*290*	*630*
COMMERCIAL	12,854	34	-42	-8	530	596	1,126	981	909	1,890
TOURISM	341	12	11	23	18	17	35	73	71	144
LODGING	0	0	0	0	0	0	0	0	0	0
TOTAL	**24,056**	**-251**	**371**	**120**	**1,151**	**861**	**2,012**	**1,743**	**1,640**	**3,383**

The anticipated reuse of Fort Monroe has the potential to generate 24,056 total daily trips, 120 in the AM peak hour, 2,012 in the PM peak hour, and 3,383 in the Saturday peak hour. The inbound morning peak hour generation is negative due to the significant reduction in office land uses proposed in the reuse plan.

2.2 Traffic Distribution

The directional distribution and assignment of trips generated by the proposed reuse of Fort Monroe was based on a review of existing roadway volumes, an understanding of travel patterns within the study area, and discussions with the City of Hampton and stakeholders during the December 12, 2008 meeting. Three different distributions were identified, and agreed to by all stakeholders, based upon the type of trips associated with the various land uses. Residential trips have travel patterns unique to the other two components and are based on work trips located outside of Fort Monroe. Tourism and lodging trips are anticipated to be a regional attraction with non-local patrons unfamiliar with the local street network. Finally, office and commercial trips have similar characteristics with trips associated with uses within the Fort, attracting local users who are familiar with the external roadway network. Residential, Tourism/Lodging, and Commercial/Office trip distributions are illustrated in **Figures 5, 6,** and **7**, and are outlined below:

<u>Residential</u>

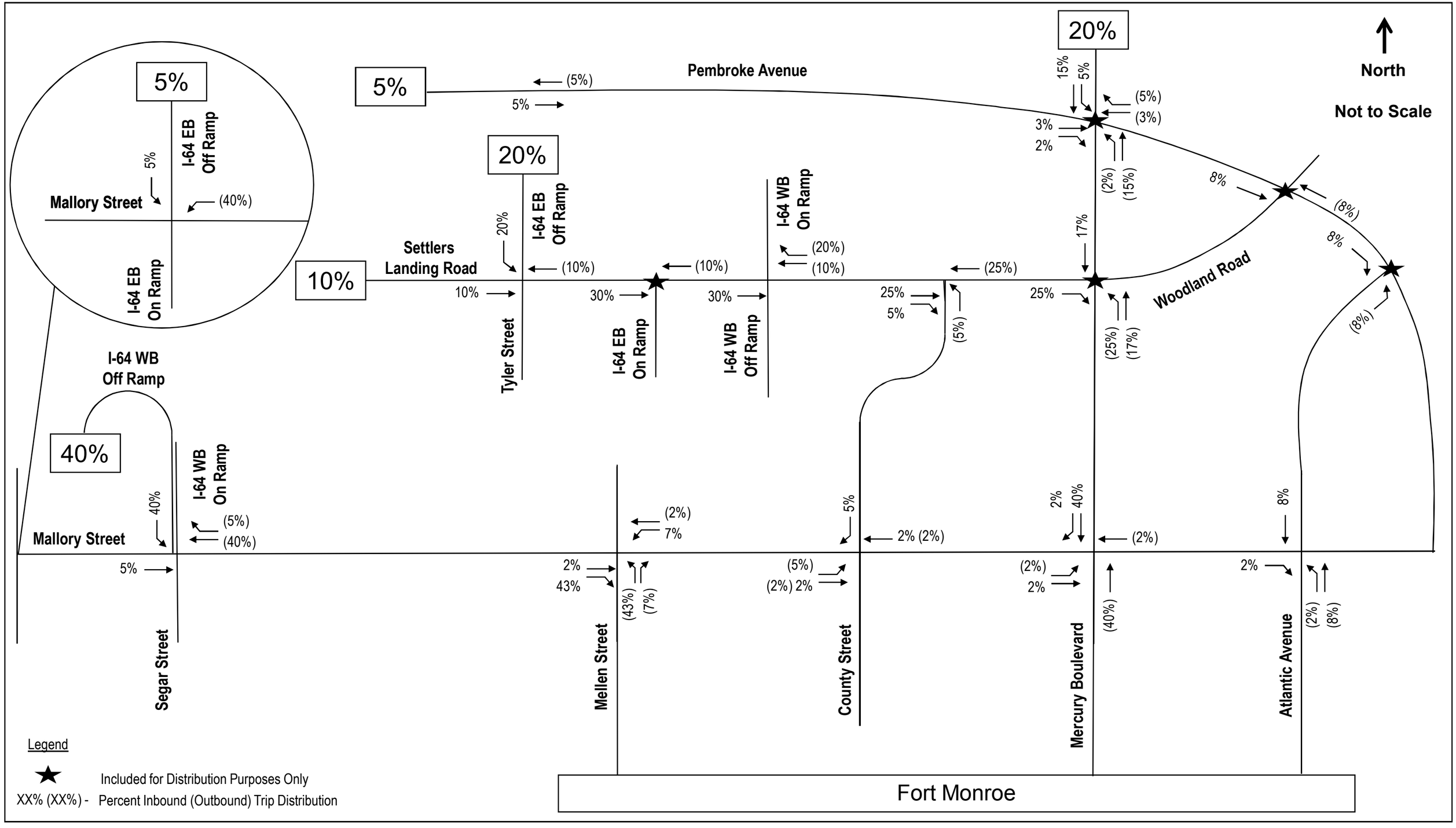
- 40% to/from the east on I-64 (all 40% at the Mallory Street Interchange)
- 25% to/from the west on I-64
    - 20% at the Woodland Road Interchange and 5% at the Mallory Street Interchange
- 20% to/from the north on Mercury Boulevard
- 10% to/from the west on Settlers Landing Road
- 5% to/from the west on Pembroke Avenue

<u>Tourism/Lodging</u>

- 40% to/from the west on I-64
    - 25% at the Woodland Road Interchange and 15% at the Mallory Street Interchange
- 30% to/from the east on I-64 (all 30% at the Mallory Street Interchange)
- 10% to/from the north on Mercury Boulevard
- 10% to/from the west on Settlers Landing Road
- 10% to/from the west on Pembroke Avenue

<u>Commercial/Office</u>

- 35% to/from the west on I-64
    - 30% at the Woodland Road Interchange and 5% at the Mallory Street Interchange
- 20% to/from the east on I-64 (all 20% at the Mallory Street Interchange)
- 20% to/from the north on Mercury Boulevard
- 15% to/from the west on Pembroke Avenue
- 5% to/from the west on Settlers Landing Road
- 5% to/from the west on Tyler Street (Hampton University)



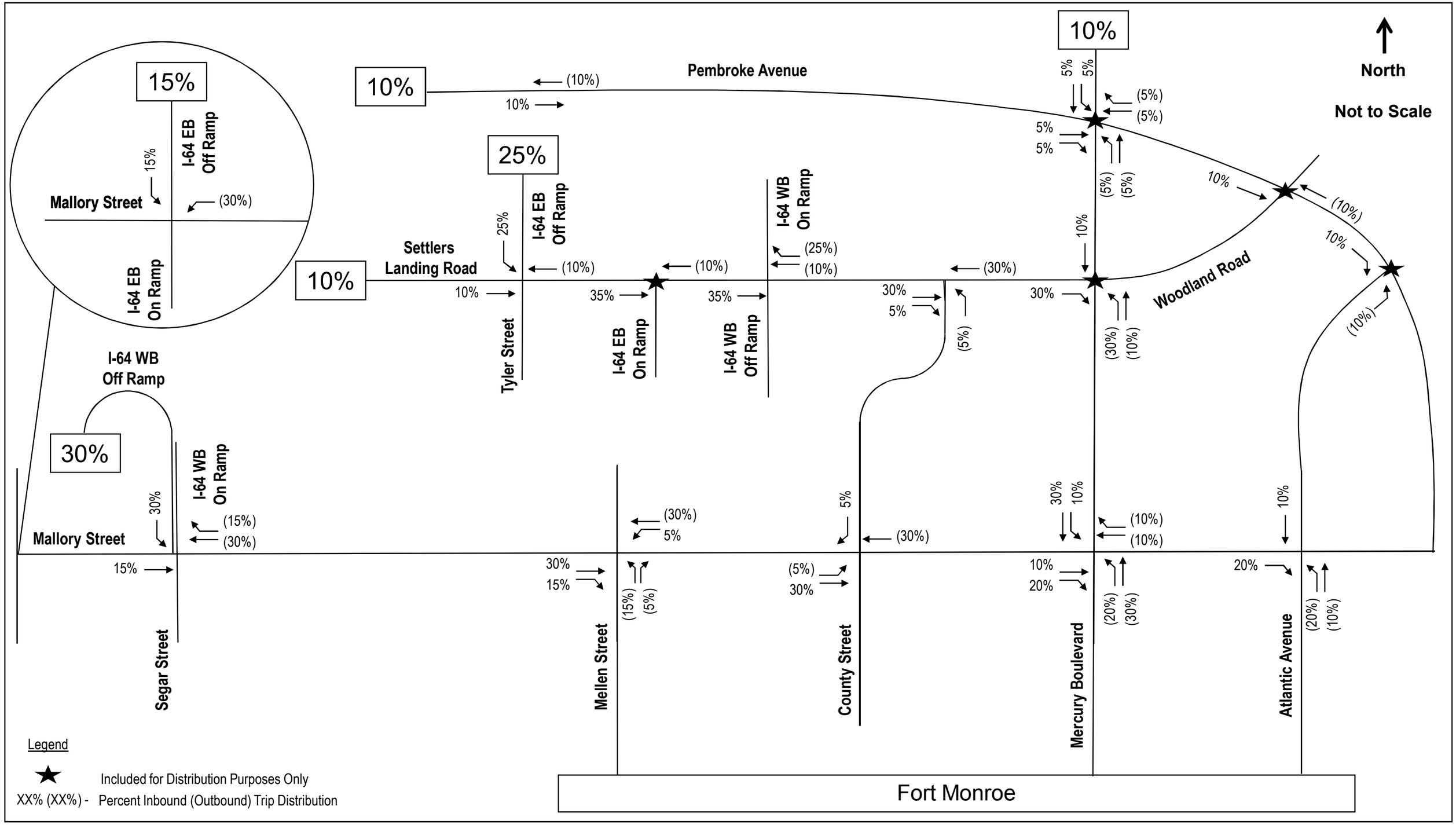
Kimley-Horn and Associates, Inc.

Fort Monroe EIS
Traffic Analysis
Hampton, Virginia

Trip Distribution – Residential

FIGURE
5

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.



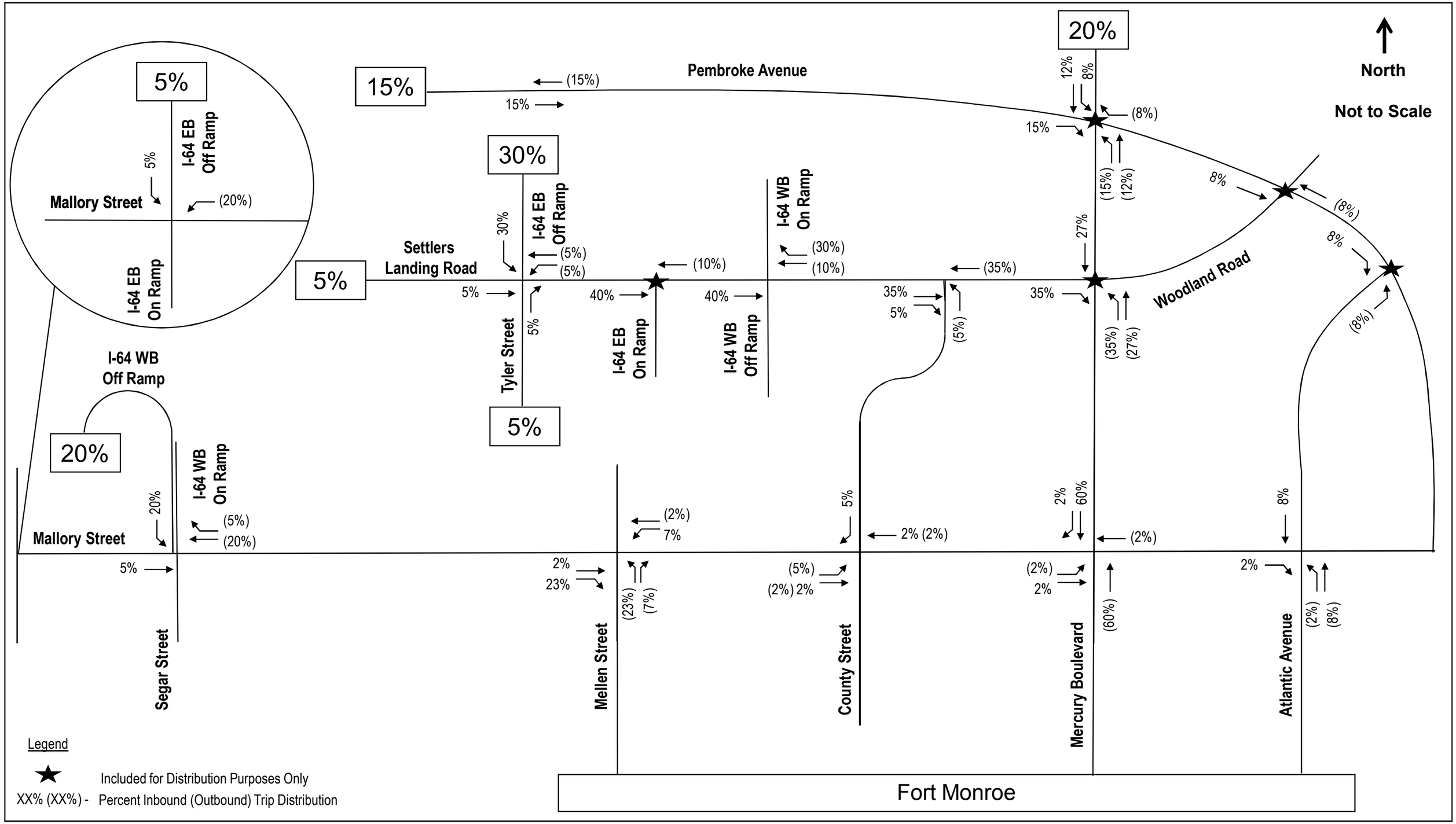
Kimley-Horn and Associates, Inc.

Fort Monroe EIS
Traffic Analysis
Hampton, Virginia

Trip Distribution – Tourism / Lodging

FIGURE
6

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.



Kimley-Horn and Associates, Inc.

Fort Monroe EIS
Traffic Analysis
Hampton, Virginia

Trip Distribution – Commercial / Office

FIGURE
7

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

2.3 Site Access and Traffic Assignment

As recommended in the FMRP there will be three roadways providing access to Fort Monroe, including Mellen Street (main gate), Mercury Boulevard, and a proposed northern connection at Atlantic Avenue/Fenwick Road. All three of these access points intersect Mallory Street; however Mercury Boulevard extends north, intersecting Woodland Road/Settlers Landing Road, and continuing in a north-westerly direction through the entire City of Hampton and Newport News, eventually terminating at the James River Bridge. In addition to Mallory Street, the proposed Atlantic Avenue/Fenwick Road connection will also provide a connection to Pembroke Avenue.

Based upon the nature of Fort Monroe trips, each of these three roadways have a unique attractiveness, based on their location and the type of user destined to and from Fort Monroe. **Table 10** illustrates the percentage of Fort Monroe traffic accessing the Fort along each roadway.

Table 10: Trip Distribution by Roadway

Roadway	Residential Trips	Tourism/ Lodging Trips	Commercial/ Office Trips
Mellen Street	50%	20%	30%
Mercury Boulevard	40%	50%	60%
Atlantic/Fenwick	10%	30%	10%

With exception to residential trips, Mercury Boulevard will serve as the primary access to/from Fort Monroe, given the capacity of the facility combined with it's connectively to the local roadway network. This will allow the Mellen Street connection to serve local residents, while maintaining the historic integrity of the Fort.

To encourage this traffic pattern, appropriate signage is recommended on all roadway segments approaching the Fort, internal to the Fort, and at the reconfigured main gate. The Atlantic Avenue/Fenwick Road connection is anticipated to be attractive to local residents and patrons destined to the Parks and Recreation areas (Zone 1) of Fort Monroe.

2.4 Projected Traffic Volumes

Historic traffic growth is the increase in traffic volumes due to usage increases and non-specific growth throughout an area. One method of determining reasonable growth rates for an area is to research past

traffic counts for a roadway or intersection; however based on the data available from the City of Hampton, additional data was sought. Therefore, traffic counts and projections from the 2030 Hampton Roads Long Range Plan (LRP) were obtained from the HRPDC. The LRP is an approved traffic demand model incorporating all planned socioeconomic data and development within the Hampton Roads area. Utilizing the LRP is accepted as standard of practice for determining growth within Hampton Roads, and was accepted by all stakeholders to be the basis for determining background growth for this study. **Table 11** summarizes both existing and projected volumes for the primary roadways within the Fort Monroe study area.

Table 11: Arterial Volumes and Growth Rates within the Fort Monroe Study Area

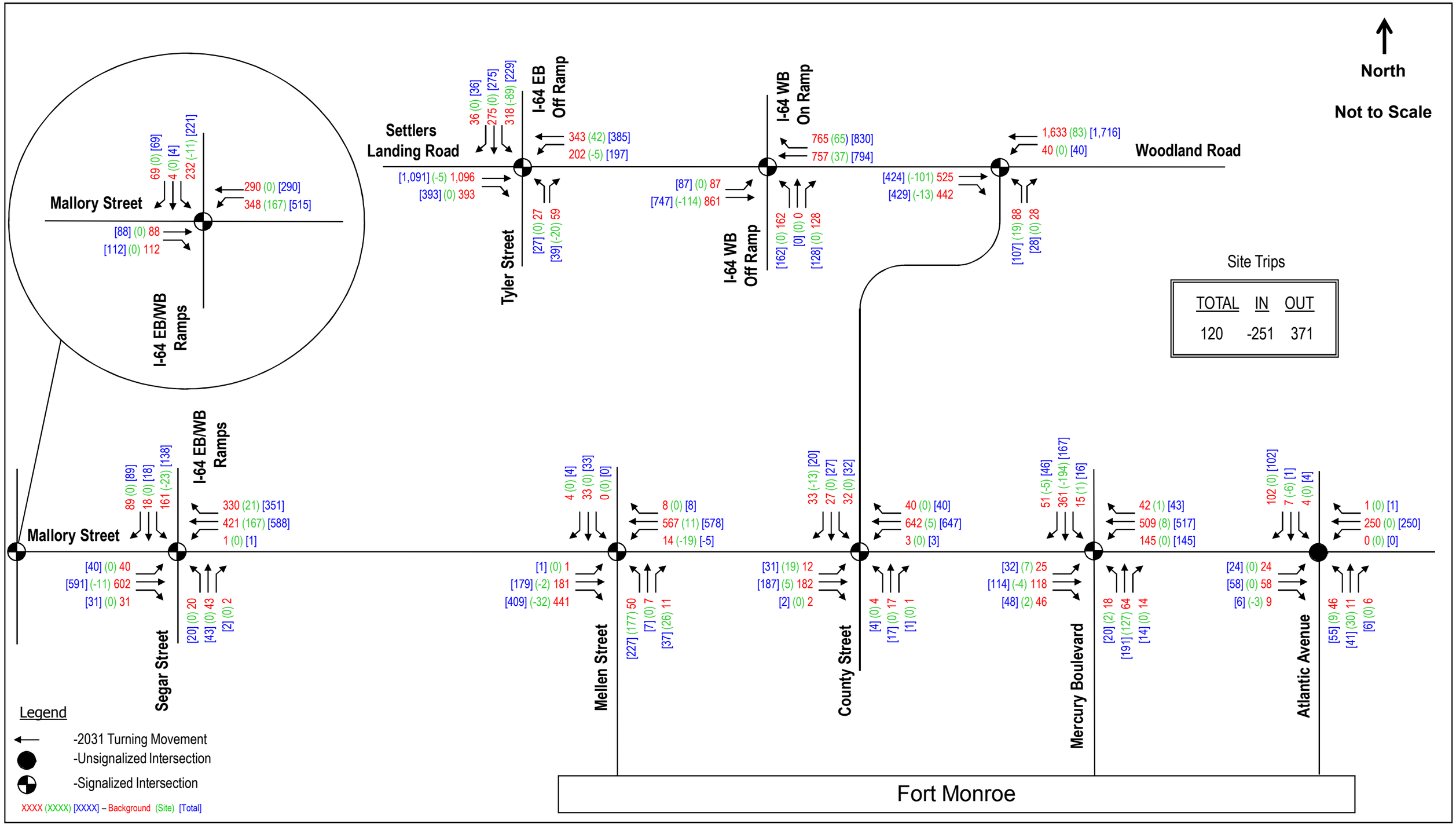
Roadway	Count Year	ADT Count	Forecasted ADT	Growth Rate
Mallory Street	2005	7,125	13,000	2.43%
Woodland Road	2005	23,331	29,000	0.87%
County Street	2006	5,239	7,000	1.21%
Pembroke Avenue	2005	13,928	17,000	0.80%
Mercury Boulevard	2005	14,158	24,000	2.13%

Based on the anticipated growth observed in the LRP, along with knowledge of the study area, a 1.0% growth rate per year throughout the entire Fort Monroe study area through 2030 was agreed to by all stakeholders.

To obtain 2031 background traffic volumes, existing (2008) traffic volumes at the through movements along Mallory Street and Woodland Road were incrementally increased using the aforementioned annual growth rate. Existing traffic volumes were increased by 26 percent to project anticipated traffic volumes in 2031.

Once the background traffic volumes were established, traffic associated with the proposed reuse of Fort Monroe was added to develop total traffic volumes for 2031. The following figures illustrate future turning movement volumes:

- **Figure 8**—2031 AM peak hour
- **Figure 9**—2031 PM peak hour
- **Figure 10**—2031 Saturday peak hour



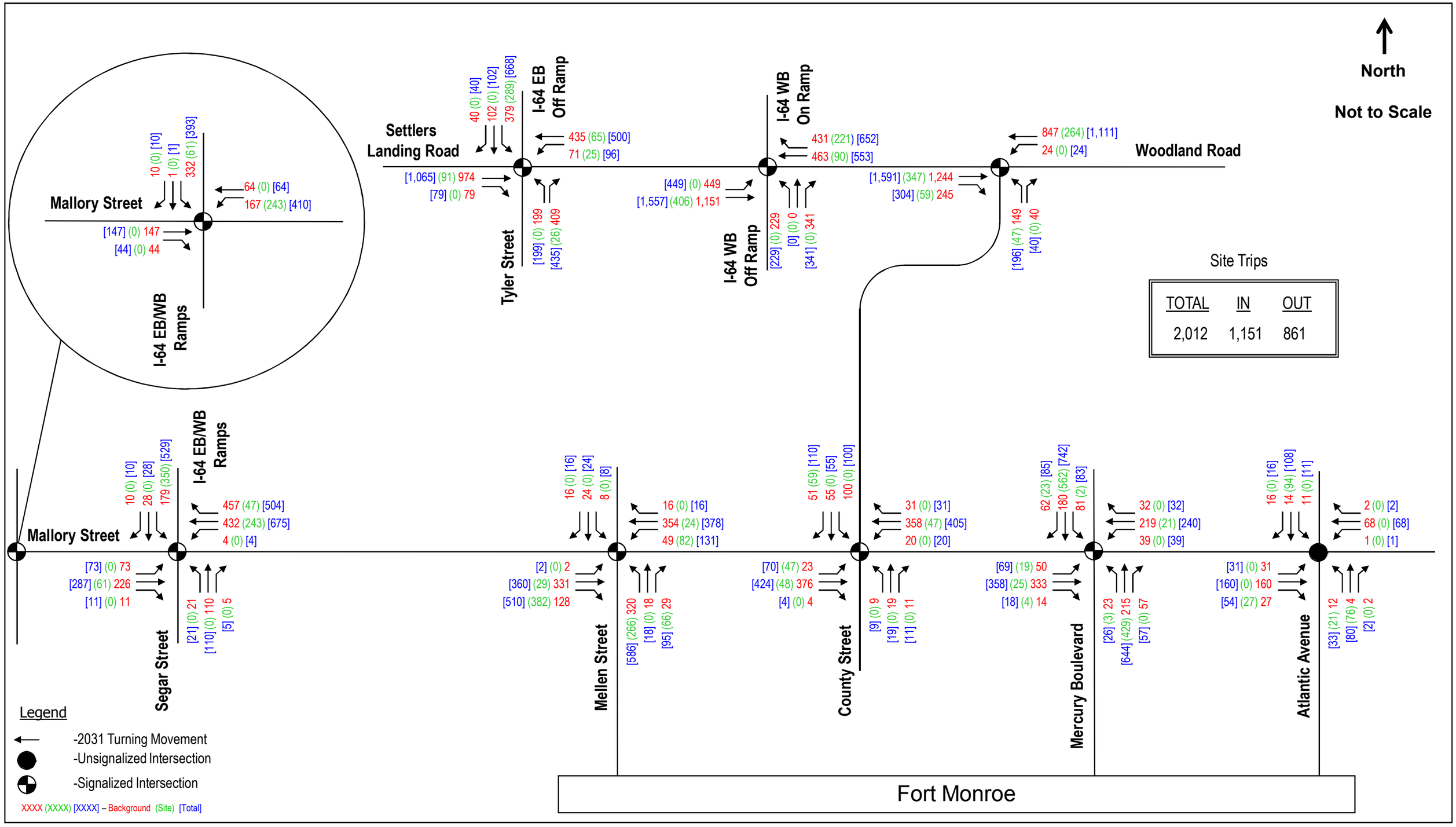
Kimley-Horn and Associates, Inc.

Fort Monroe EIS
Traffic Analysis
Hampton, Virginia

Weekday Future (2031) AM Peak Hour
Turning Movement Volumes

FIGURE
8

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.



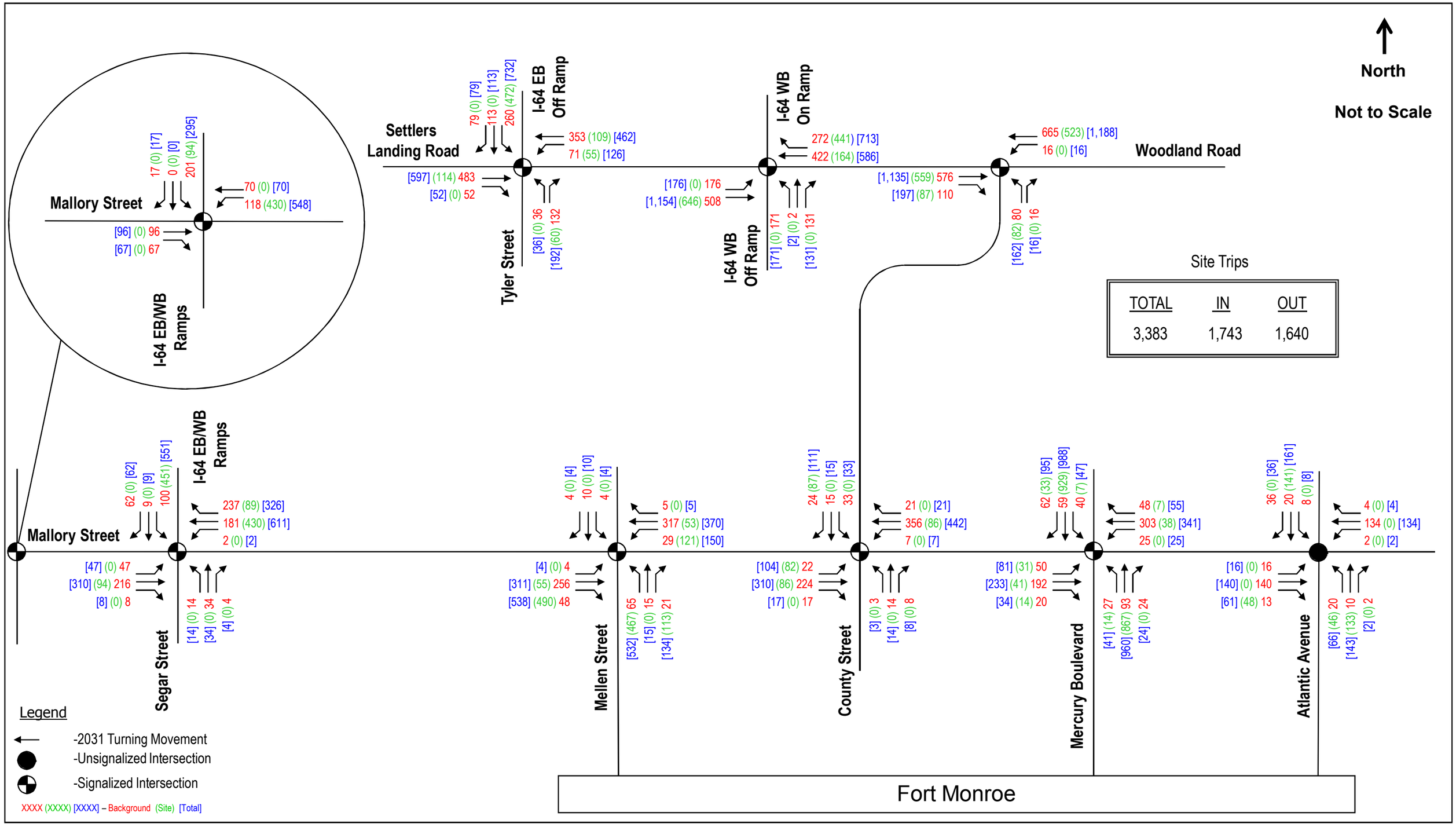
Kimley-Horn and Associates, Inc.

Fort Monroe EIS
Traffic Analysis
Hampton, Virginia

Weekday Future (2031) PM Peak Hour
Turning Movement Volumes

FIGURE
9

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.



Kimley-Horn and Associates, Inc.

Fort Monroe EIS
Traffic Analysis
Hampton, Virginia

Saturday Future (2031) Peak Hour
Turning Movement Volumes

FIGURE
10

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

3.0 Traffic Analysis

Analyses for signalized and unsignalized intersections along the external roadway network were evaluated during the morning, evening, and Saturday peak hours for the following scenarios:

- 2008 Existing
- 2031 with no redevelopment of Fort Monroe (and the Army remains)
- 2031 with full redevelopment of Fort Monroe, without proposed roadway improvements
- 2031 with full redevelopment of Fort Monroe, including proposed improvements that may include transportation infrastructure recommendations or minor operation adjustments

Analyses were completed to determine the operating characteristics of study area intersections and roadways using Synchro Professional 6.0, which uses methodologies contained in the 2000 *Highway Capacity Manual* (HCM) [TRB Special Report 209, 2000].

TMCs data and future traffic projections were used with information about the number of lanes and traffic control at each intersection to determine existing and future levels of service. Level of service (LOS) describes traffic conditions—the amount of traffic congestion—at an intersection or on a roadway. LOS ranges from A to F—A indicating a condition of little or no congestion and F a condition with severe congestion, unstable traffic flow, and stop-and-go conditions. For intersections, LOS is based on the average delay experienced by all traffic using the intersection during the busiest (peak) 15-minute period. LOS A through D is generally considered acceptable.

Cycle lengths, splits, and offsets were optimized for each scenario to reflect a best case coordinated signal system. Existing 2008 scenarios were calibrated to reflect existing timings obtained from the City of Hampton. As mentioned above, the analysis was performed along the external roadway network to include the intersections listed in Section 1.

The results are presented in the following summaries, and supporting calculations are provided in the **Appendix**.

3.1 Mallory Street/I-64 EB Off-Ramp

Under existing conditions, this signalized intersection operates at LOS C or better in all three peak hours. With the addition of 23 years of background traffic growth and proposed trips associated with Fort Monroe, this intersection is anticipated to maintain a level of service of C or better in all three peak hours. **Table 12** shows levels of service and delay for the intersection under existing (2008) and future (2031) no-build and build-out conditions.

Table 12: Mallory Street/I-64 EB On- & Off-Ramp Intersection LOS

Scenario	Weekday AM Peak Hour LOS (delay in sec/veh)				Weekday PM Peak Hour LOS (delay in sec/veh)				Saturday Peak Hour LOS (delay in sec/veh)			
	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
	Overall Intersection				Overall Intersection				Overall Intersection			
Existing 2008	B (15.6)	A (6.9)	--	C (34.2)	B (13.9)	A (7.1)	--	C (34.1)	A (9.5)	A (5.5)	--	C (30.5)
	B (16.2)				C (21.4)				B (16.8)			
2031 No-Build	C (24.6)	A (5.5)	--	C (34.2)	B (14.3)	A (2.5)	--	D (38.1)	A (9.8)	A (2.9)	--	C (32.0)
	B (16.5)				C (21.4)				B (16.0)			
2031 Build	D (36.9)	A (5.8)	--	D (48.3)	C (34.7)	A (6.8)	--	D (46.5)	D (37.4)	A (6.7)	--	D (46.9)
	C (20.2)				C (26.8)				C (22.8)			
2031 Build w/ Improvements	C (30.5)	A (6.3)	--	D (48.3)	C (30.8)	B (10.2)	--	D (46.5)	C (33.3)	B (12.8)	--	D (46.9)
	B (19.6)				C (27.6)				C (25.6)			

Source: Kimley-Horn and Associates, Inc.

In addition to intersection LOS, a queuing analysis was performed using the SimTraffic module of *Synchro 6* for the 2031 Build with Improvements scenario to identify potential impacts to I-64. The analysis indicated that the existing intersection geometry has adequate storage lengths to accommodate projected 2031 total traffic throughout all three peak periods, as illustrated in **Table 13**. The only recommendation for this intersection was to lag the westbound left-turn lane while developing and implementing optimized signal timings. Detailed level of service calculations are provided in the **Appendix**.

Table 13: Mallory Street/I-64 EB On- & Off-Ramp Intersection Queuing Results

Scenario	Mallory Street/I-64 EB Off-Ramp Queuing Results		
	Southbound Left/ Thru/ Right Turn Lane		
	95% Queue Length (ft)	Storage Bay Length (ft)	Length of Ramp (ft)
AM	300	800	800
PM	400	800	800
SAT	350	800	800

3.2 Mallory Street /I-64 WB Off-Ramp/Segar Street

Under existing conditions, this signalized intersection operates at LOS C, D, and B during the morning, evening and Saturday peak periods, respectively. The evening peak hour LOS D (35.4 seconds) barely crosses the upper threshold of a LOS C (35.0 seconds). With anticipated growth through 2031, this intersection will maintain existing LOS during all three peak periods. However, with the addition of trips associated with the Fort Monroe redevelopment plan, demand increases significantly during the evening and Saturday peak hours along the southbound and westbound approaches, causing poor overall LOS and high delays. In order to achieve acceptable LOS and provide sufficient storage to minimize impacts to I-64, additional laneage is necessary. **Table 14** shows levels of service and delay for the intersection under existing (2008) and future (2031) no-build and build-out conditions.

Table 14: Mallory Street/I-64 WB On- & Off-Ramp/Segar Street Intersection LOS

Scenario	Weekday AM Peak Hour LOS (delay in sec/veh)				Weekday PM Peak Hour LOS (delay in sec/veh)				Saturday Peak Hour LOS (delay in sec/veh)			
	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
	Overall Intersection				Overall Intersection				Overall Intersection			
Existing 2008	B (11.0)	C (21.0)	C (25.9)	D (40.0)	A (8.8)	D (43.0)	C (26.5)	D (44.8)	A (4.5)	A (7.8)	C (26.6)	C (31.1)
	C (20.9)				D (35.4)				B (12.9)			
2031 No-Build	A (6.2)	C (28.1)	C (25.4)	D (37.8)	A (1.8)	D (44.9)	C (27.3)	D (51.4)	A (1.1)	A (8.5)	C (28.0)	C (34.8)
	C (21.1)				D (35.7)				B (12.3)			
2031 Build	A (7.3)	C (31.3)	C (32.3)	D (44.5)	A (5.9)	F (421.7)	B (18.1)	F (141.6)	A (2.9)	F (262.8)	B (15.4)	F (82.7)
	C (24.7)				F (258.7)				F (151.7)			
2031 Build w/ Improvements	A (4.1)	A (5.1)	D (49.4)	C (33.3)	A (1.9)	C (26.1)	D (53.1)	D (53.9)	A (1.9)	C (22.8)	D (49.2)	D (36.2)
	A (9.9)				C (30.7)				C (23.8)			

Source: Kimley-Horn and Associates, Inc.

By widening Mallory Street to four-lanes, constructing an additional exclusive southbound left-turn lane and exclusive westbound right-turn lane, and implementing optimized signal timings, acceptable LOS can be achieved at this intersection. The LOS F along the southbound and westbound approaches under the existing local street network is improved to a LOS D and C, respectively, with overall intersection LOS improving from a LOS F to a C during the evening and Saturday peaks. All detailed level of service calculations are provided in the **Appendix**. In addition to LOS calculations, a queuing analysis was performed using the SimTraffic module of *Synchro 6* for the 2031 Build with Improvements scenario to identify any potential impacts to I-64. The analysis indicated that the intersection has adequate storage lengths to accommodate projected 2031 total traffic during all three peak periods, as illustrated in **Table 15**.

Table 15: Mallory Street/I-64 WB On- & Off-Ramp/Segar Street Intersection Queuing Results

	Mallory Street/I-64 WB On- & Off-Ramp Queuing Results					
	Southbound Left Turn			Southbound Thru/ Right Turn		
Scenario	95% Queue Length (ft)	Storage Bay Length (ft)	Length of Ramp (ft)	95% Queue Length (ft)	Storage Bay Length (ft)	Length of Ramp (ft)
AM	150	250	800	75	800	800
PM	300	250	800	350	800	800
SAT	300	250	800	350	800	800

3.3 Mallory Street/Mellen Street

This intersection currently operates acceptably along the east- and westbound approaches during all peak hours. The north- and southbound approaches operate at LOS D with a limited capacity, single lane approach. With the addition of background growth and traffic generated by the Fort Monroe reuse development, the northbound approach is expected to deteriorate to a LOS F with an average 15 and 7 minute delay per vehicle during the evening and Saturday peak hours, respectively. This heavy traffic demand is a result of Mellen Street serving as one of only three roadways providing access to Fort Monroe. **Table 16** shows levels of service and delay for the intersection under existing (2008) and future (2031) no-build and build-out conditions.

Table 16: Mallory Street/Mellen Street Intersection LOS

Scenario	Weekday AM Peak Hour LOS (delay in sec/veh)				Weekday PM Peak Hour LOS (delay in sec/veh)				Saturday Peak Hour LOS (delay in sec/veh)			
	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
	Overall Intersection				Overall Intersection				Overall Intersection			
Existing 2008	A (2.3)	A (1.7)	D (36.7)	D (35.4)	A (4.9)	B (17.9)	D (39.1)	B (19.5)	A (2.2)	A (4.2)	C (32.5)	C (29.3)
	A (5.1)				C (20.3)				A (8.4)			
2031 No-Build	A (3.3)	A (1.0)	D (36.1)	D (35.4)	A (6.3)	A (9.0)	D (54.9)	C (21.5)	A (0.9)	A (0.7)	C (34.8)	C (30.4)
	A (4.9)				C (21.5)				A (5.9)			
2031 Build	A (5.0)	A (8.3)	D (54.7)	C (30.6)	A (7.0)	B (13.0)	F (900.8)	D (36.2)	B (14.5)	D (39.8)	F (439.2)	C (27.9)
	B (16.0)				F (300.4)				F (160.3)			
2031 Build w/ Improvements	A (2.4)	A (4.3)	D (46.3)	D (50.4)	B (10.3)	B (13.7)	D (52.7)	F (131.0)	A (5.8)	B (11.1)	D (46.7)	E (56.2)
	B (12.3)				C (27.7)				C (21.0)			

Source: Kimley-Horn and Associates, Inc.

With the anticipated delays projected for this intersection under 2031 build conditions, it is expected that some of the northbound traffic will find alternate routes through the adjacent roadway network. This may cause impacts to other roadways in the community as traffic volumes increase on these neighborhood streets during peak commuter periods. The proposed recommendations seek to keep commuter traffic on Mellen Street by providing adequate capacity and operations at its intersection with Mallory Street. To provide adequate LOS at this intersection along with capacity to meet traffic demands along the northbound approach, it is recommended that an additional left-turn lane be constructed to provide dual-left-turn lanes onto Mallory Street. This recommendation not only requires improvements along Mellen Street, but also requires Mallory Street to be widened to have two receiving lanes, and therefore, a four-lane divided facility. Given the close intersection spacing along Mallory Street, this recommended widening needs to be extended between the I-64 interchange and Mellen Street to eliminate insufficient merge distances as vehicles access side streets and I-64. In addition, Mallory Street is currently a four-lane roadway east of Mercury Boulevard. Therefore, the widening should be extended to Mercury Boulevard for lane continuity. This widening will provide extra capacity at the County Street and Mercury Boulevard intersections. While these recommended improvements will provide adequate traffic operations along Mallory Street, they will cause significant right-of-way impacts, including property acquisition and removal of buildings, sidewalks, parking, and recently constructed streetscape improvements by the City of Hampton.

In addition to providing additional laneage along Mellen Street, regional traffic destined to and from Fort Monroe associated with commercial and tourism components will be encouraged to use Mercury Boulevard as the primary access through the use of signage and signal timing that is more favorable to side street demands. In addition to all transportation infrastructure improvements, optimized signal timing plans were developed for this intersection. Detailed level of service calculations are provided in the **Appendix**.

3.4 Mallory Street/County Street

Currently, this signalized intersection operates at LOS B or better during all peak periods. With the addition of background growth and traffic generated by the Fort Monroe redevelopment, the overall intersection will continue to operate at LOS B or better during all peak periods. With the increase in demand along Mallory Street, along with traffic generated by the reuse plan by 2031, both northbound and southbound side-street approaches will decrease to a LOS D during the AM and Saturday peak hours, and a LOS D and E in the PM peak hour, respectively. However, overall mainline operations and progression are maintained along Mallory Street. **Table 17** shows levels of service and delay for the intersection under existing (2008) and future (2031) no-build and build-out conditions.

Table 17: Mallory Street/County Street Intersection LOS

Scenario	Weekday AM Peak Hour LOS (delay in sec/veh)				Weekday PM Peak Hour LOS (delay in sec/veh)				Saturday Peak Hour LOS (delay in sec/veh)			
	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
	Overall Intersection				Overall Intersection				Overall Intersection			
Existing 2008	A (1.5)	A (2.5)	D (35.7)	D (36.9)	A (6.0)	A (4.8)	C (30.4)	D (44.3)	A (0.9)	A (2.5)	C (31.1)	C (31.9)
	A (7.0)				B (15.3)				A (6.5)			
2031 No-Build	A (1.2)	A (4.7)	D (35.3)	D (36.8)	A (2.1)	A (6.5)	C (30.7)	D (44.1)	A (1.6)	A (2.6)	C (31.3)	C (32.2)
	A (7.7)				B (13.0)				A (6.1)			
2031 Build	A (1.4)	A (2.6)	D (45.9)	D (48.0)	A (3.5)	A (3.3)	D (38.5)	E (58.2)	A (2.5)	A (1.1)	D (45.2)	D (45.6)
	A (6.8)				B (16.0)				A (9.2)			
2031 Build w/ Improvements	A (1.6)	A (0.9)	D (45.1)	D (48.0)	A (3.3)	A (2.0)	D (37.4)	D (54.9)	A (1.3)	A (0.9)	D (44.9)	D (48.6)
	A (5.7)				B (14.7)				A (9.1)			

Source: Kimley-Horn and Associates, Inc.

In addition to optimized signal timing, the only other recommendation for this intersection was to widen Mallory Street to a four-lane facility, providing the east- and westbound approaches with a shared

through- left turn lane and a shared through-right turn lane. Detailed level of service calculations are provided in the **Appendix**.

3.5 Mallory Street/Mercury Boulevard

This signalized intersection operates at overall LOS C during the morning and evening existing and 2031 no-build peak periods, and LOS B during the Saturday existing and 2031 no-build peak hour. With the addition of traffic associated with Fort Monroe reuse plan, some approaches deteriorate to LOS D, however overall LOS is maintained from the no-build, with exception of the Saturday peak hour which will deteriorate to a LOS C. **Table 18** shows levels of service and delay for the intersection under existing (2008) and future (2031) no-build and build-out conditions.

Table 18: Mallory Street/Mercury Boulevard Intersection LOS

Scenario	Weekday AM Peak Hour LOS (delay in sec/veh)				Weekday PM Peak Hour LOS (delay in sec/veh)				Saturday Peak Hour LOS (delay in sec/veh)			
	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
	Overall Intersection				Overall Intersection				Overall Intersection			
Existing 2008	B (16.4)	B (16.6)	C (27.5)	C (32.7)	B (10.9)	B (14.3)	C (31.5)	D (35.4)	B (12.4)	A (9.3)	C (31.1)	C (31.0)
	C (22.7)				C (23.4)				B (18.0)			
2031 No-Build	C (21.8)	B (17.2)	C (27.8)	C (32.4)	B (13.3)	B (14.1)	C (31.1)	C (34.9)	B (11.3)	A (9.4)	C (31.0)	C (30.9)
	C (23.2)				C (22.9)				B (16.9)			
2031 Build	B (15.8)	B (15.9)	D (46.0)	D (45.3)	C (34.7)	C (33.0)	C (20.6)	C (30.6)	D (40.6)	D (50.8)	C (23.3)	C (27.0)
	C (25.9)				C (28.6)				C (30.7)			
2031 Build w/ Improvements	B (17.1)	B (14.1)	D (46.0)	D (45.3)	C (33.9)	C (29.1)	C (20.6)	C (30.6)	D (35.2)	C (34.3)	C (23.4)	C (27.0)
	C (25.1)				C (28.0)				C (27.7)			

Source: Kimley-Horn and Associates, Inc.

The only recommendation for this intersection is to develop and implement optimized signal timings. Detailed level of service calculations are provided in the **Appendix**.

3.6 Mallory Street/Atlantic Avenue

This unsignalized intersection operates acceptably under existing and 2031 no-build scenarios for each peak hour. With the proposed connection to Fenwick Road and addition of traffic generated by the Fort Monroe Reuse Plan, there will be no adverse impacts created during peak weekday commuter hours. During the Saturday peak period, the northbound approach is anticipated to deteriorate to a LOS D, with

the LOS C threshold being at 25.0 seconds of delay. However, during each of the three peak periods, Mallory Street LOS is acceptable (LOS A). **Table 19** shows levels of service and delay for the intersection under existing (2008) and future (2031) no-build and build-out conditions.

Table 19: Mallory Street/Atlantic Avenue Intersection LOS

Scenario	* Weekday AM Peak Hour LOS (delay in sec/veh)				* Weekday PM Peak Hour LOS (delay in sec/veh)				* Saturday Peak Hour LOS (delay in sec/veh)			
	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
	Overall Intersection				Overall Intersection				Overall Intersection			
Existing 2008	A (2.4)	A (0.0)	B (13.1)	A (9.9)	A (1.3)	A (0.1)	B (11.1)	B (10.2)	A (0.9)	A (0.1)	B (11.5)	B (10.1)
	A (4.9)				A (2.9)				A (3.4)			
2031 No-Build	A (2.1)	A (0.0)	B (13.9)	B (10.2)	A (1.1)	A (0.1)	B (11.6)	B (10.5)	A (0.8)	A (0.1)	B (12.1)	B (10.4)
	A (4.5)				A (2.6)				A (3.0)			
2031 Build	A (2.2)	A (0.0)	B (14.9)	A (10.0)	A (1.0)	A (0.1)	C (15.6)	B (14.2)	A (0.6)	A (0.1)	D (26.1)	C (16.6)
	A (5.4)				A (7.1)				B (12.2)			
2031 Build w/ Improvements	A (2.2)	A (0.0)	B (14.9)	A (10.0)	A (1.0)	A (0.1)	C (15.6)	B (14.2)	A (0.6)	A (0.1)	D (26.1)	C (16.6)
	A (5.4)				A (7.1)				B (12.2)			

Source: Kimley-Horn and Associates, Inc.

* Unsignalized Intersection

No improvements are recommended at this intersection. Detailed level of service calculations are provided in the **Appendix**.

3.7 Woodland Road/County Street

Under existing and 2031 no-build conditions, this intersection operates at LOS A with all approaches operating at a LOS D or better under each peak hour. With the addition of background traffic growth and site trips associated with the Fort Monroe Reuse Plan, all overall and approach operations will be maintained, with the exception of the northbound approach during the Saturday peak. While the LOS deteriorates slightly from a LOS C to LOS D, the delay is less than 10 seconds and mainline Woodland Road continues to operate at a LOS A. **Table 20** shows levels of service and delay for the intersection under existing (2008) and future (2031) no-build and build-out conditions.

Table 20: Woodland Road/County Street Intersection LOS

Scenario	Weekday AM Peak Hour LOS (delay in sec/veh)				Weekday PM Peak Hour LOS (delay in sec/veh)				Saturday Peak Hour LOS (delay in sec/veh)			
	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
	Overall Intersection				Overall Intersection				Overall Intersection			
Existing 2008	A (1.3)	A (4.5)	D (45.3)	--	A (5.3)	A (4.2)	D (35.8)	--	A (1.8)	A (3.2)	C (34.3)	--
	A (5.6)				A (8.0)				A (5.4)			
2031 No-Build	A (0.9)	A (5.2)	D (45.3)	--	A (1.8)	A (4.2)	D (35.8)	--	A (2.4)	A (3.1)	C (34.3)	--
	A (5.6)				A (5.4)				A (5.1)			
2031 Build	A (0.7)	A (5.4)	D (45.9)	--	A (4.0)	A (4.7)	D (50.1)	--	A (1.6)	A (4.1)	D (45.3)	--
	A (6.2)				A (8.0)				A (5.9)			
2031 Build w/ Improvements	A (0.9)	A (5.4)	D (46.1)	--	A (3.8)	A (4.7)	D (42.4)	--	A (2.2)	A (4.1)	D (42.8)	--
	A (6.3)				A (7.2)				A (6.0)			

Source: Kimley-Horn and Associates, Inc.

The only recommendation for this intersection is to develop and implement optimized signal timings. Detailed level of service calculations are provided in the **Appendix**.

3.8 Settlers Landing Road/I-64 WB On- and Off-Ramp

Under existing conditions, this signalized intersection operates at LOS C or better during the AM and Saturday peak hours, however during the PM peak hour, east- and westbound approaches reach LOS D. With the addition of background traffic, overall LOS improves during the AM and Saturday peak hours with the implementation of optimized signal timings, while evening peak hour LOS is maintained. Site traffic associated with Fort Monroe will increase volumes along Woodland Road during the evening peak hour. Therefore, it is recommended that the northbound approach be restriped to better use the existing pavement to provide lane capacity. Minor restriping of this approach will provide acceptable LOS. **Table 21** shows levels of service and delay for the intersection under existing (2008) and future (2031) no-build and build-out conditions.

Table 21—Settlers Landing Road/I-64 WB On- and Off-Ramp Intersection LOS

Scenario	Weekday AM Peak Hour LOS (delay in sec/veh)				Weekday PM Peak Hour LOS (delay in sec/veh)				Saturday Peak Hour LOS (delay in sec/veh)			
	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
	Overall Intersection				Overall Intersection				Overall Intersection			
Existing 2008	A (7.5)	B (18.3)	C (29.2)	--	D (40.1)	D (43.7)	C (33.2)	--	B (14.5)	C (22.2)	C (28.4)	--
	B (15.8)				D (39.6)				C (20.2)			
2031 No-Build	A (7.5)	B (19.0)	C (29.2)	--	D (51.2)	C (31.2)	C (32.4)	--	B (14.4)	B (12.3)	C (30.4)	--
	B (15.7)				D (42.5)				B (16.5)			
2031 Build	B (11.1)	D (38.8)	D (44.5)	--	E (57.1)	E (58.2)	E (64.2)	--	B (13.6)	C (26.6)	D (44.7)	--
	C (30.1)				E (58.4)				C (22.1)			
2031 Build w/ Improvements	B (10.7)	C (25.9)	D (40.7)	--	D (44.8)	D (45.0)	D (50.1)	--	B (13.7)	C (22.6)	D (43.8)	--
	C (22.4)				D (45.6)				C (20.4)			

Source: Kimley-Horn and Associates, Inc.

It is recommended that in addition to optimized signal timings being developed and implemented, the northbound approach should also be restriped to include an exclusive left-turn lane, one shared left-turn and through lane, and an exclusive channelized right-turn lane. The existing right-turn lane is yield controlled, and should be maintained as the same under the recommended striping. With each of these improvements, acceptable operations can be achieved. All approaches during the PM peak hour improve from a LOS E to a D, with overall LOS during each of the peak hours improving to a LOS D or better. Detailed level of service calculations are provided in the **Appendix**.

Given that the northbound leg of this intersection is an interstate exit ramp, additional queuing analysis was performed to identify any potential impacts to I-64. The queuing analysis indicated that with the proposed striping and signal timing recommendations, anticipated traffic demand would not create queues which would affect I-64 operations during any of the peak hour. All queuing results are illustrated in **Table 22**.

Table 22—Settlers Landing Road/I-64 WB On- and Off-Ramp Intersection Queuing Results

Scenario	Settlers Landing Road/I-64 WB On- and Off-Ramp Queuing Results					
	Northbound Left Turn			Northbound Right Turn		
	95% Queue Length (ft)	Storage Bay Length (ft)	Length of Ramp (ft)	95% Queue Length (ft)	Storage Bay Length (ft)	Length of Ramp (ft)
AM	275	200	700	50	700	700
PM	125	200	700	200	700	700
SAT	125	200	700	50	700	700

3.9 Settlers Landing Road/Tyler Street/I-64 EB Off-Ramp

Under existing conditions, this signalized intersection operates at LOS D during the AM and PM peak hours, while operating at a C during the Saturday peak. During the morning peak hour, the westbound approach experiences a LOS F, while during the evening peak hour, the northbound approach experiences a LOS E. With the implementation of optimized signal timing along Woodland Road, each peak hour will maintain its overall LOS, and improve LOS along the westbound approach during the AM peak hour. With the proposed trip generation and distribution patterns anticipated by Fort Monroe, traffic volumes will increase at this intersection. The westbound approach is observed to deteriorate from a LOS D to an E during the morning peak hour, however overall LOS is maintained during each peak hour. Even with the increased demands at this intersection, there are transportation infrastructure improvements to adjacent intersections along Woodland Road which allow for additional capacity to be allocated at this location with optimized signal timing improvements. **Table 23** shows levels of service and delay for the intersection under existing (2008) and future (2031) no-build and build-out conditions.

Table 23— Settlers Landing Road/Tyler Street/I-64 EB Off-Ramp Intersection LOS

Scenario	Weekday AM Peak Hour LOS (delay in sec/veh)				Weekday PM Peak Hour LOS (delay in sec/veh)				Saturday Peak Hour LOS (delay in sec/veh)			
	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
	Overall Intersection				Overall Intersection				Overall Intersection			
Existing 2008	C (31.7)	F (80.8)	D (43.9)	D (37.4)	D (36.1)	C (22.9)	E (72.5)	C (30.9)	C (22.5)	B (13.9)	D (39.3)	C (32.7)
	D (46.4)				D (40.7)				C (24.6)			
2031 No-Build	D (50.2)	D (41.4)	D (43.3)	D (36.3)	D (41.2)	C (23.7)	E (70.3)	C (30.4)	C (21.9)	B (17.8)	D (37.0)	D (36.5)
	D (44.5)				D (41.0)				C (25.9)			
2031 Build	D (36.1)	E (64.1)	C (33.4)	D (36.5)	D (46.4)	C (22.6)	E (60.2)	D (36.0)	D (37.6)	C (29.7)	C (32.3)	C (31.2)
	D (44.4)				D (40.5)				C (32.3)			
2031 Build w/ Improvements	C (31.9)	C (34.2)	C (32.4)	D (41.4)	D (40.4)	C (22.8)	D (52.7)	D (42.0)	C (29.1)	C (22.5)	C (32.3)	D (48.0)
	C (34.4)				D (38.7)				C (34.1)			

Source: Kimley-Horn and Associates, Inc.

In addition to implementing optimized signal timing, which includes a proposed northbound right-turn overlap, it is recommended that the southbound approach be restriped to include two left-turn lanes, a through lane, and a shared thru and right-turn lane. This recommendation does not improve the overall intersection LOS, but will better use the existing pavement to provide lane capacity to accommodate anticipated traffic demands and address any potential queuing. Detailed level of service calculations are provided in the **Appendix**.

Given that the southbound leg of this intersection is an interstate exit ramp, a queuing analysis was performed to identify any potential impacts to the interstate. The queuing analysis indicated that with the recommended striping and signal timing recommendations, projected traffic demand at this intersection could have the potential to create queues which would exceed available storage, however these queues will not affect I-64 operations during any peak hour, as illustrated in **Table 24**.

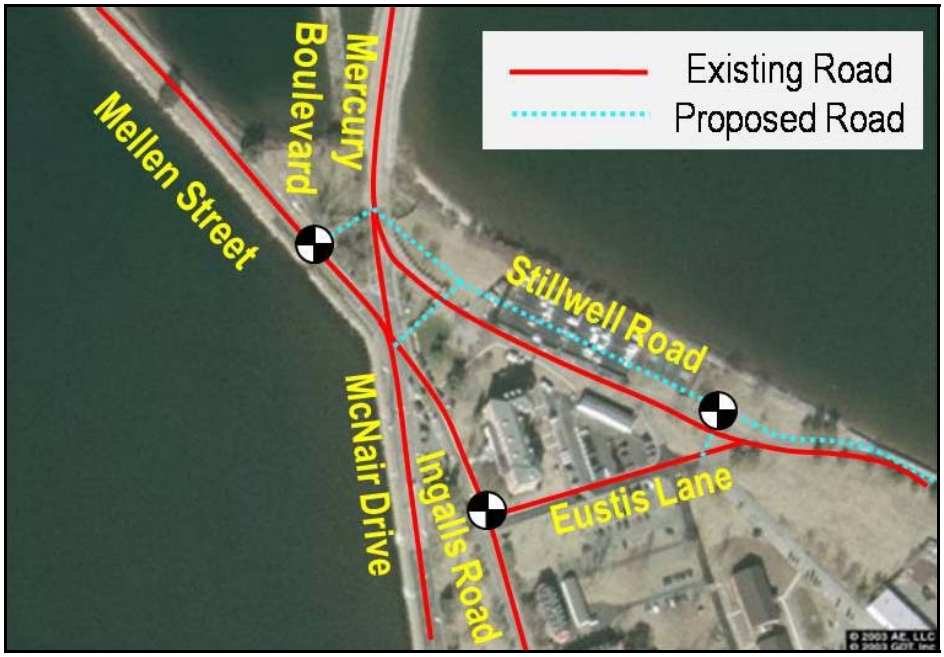
Table 24— Settlers Landing Road/Tyler Street/I-64 EB Off-Ramp Intersection Queuing Results

Scenario	Settlers Landing Road/I-64 EB Off-Ramp Queuing Results					
	Southbound Left Turn			Southbound Right Turn		
	95% Queue Length (ft)	Storage Bay Length (ft)	Length of Ramp (ft)	95% Queue Length (ft)	Storage Bay Length (ft)	Length of Ramp (ft)
AM	175	200	600	150	600	600
PM	275	200	600	100	600	600
SAT	275	200	600	100	600	600

3.10 Internal Fort Monroe Street Network (Entry Gate)

The internal network to Fort Monroe in the entry gate region includes Mellen Street (which becomes Ingalls Road within Fort Monroe), Mercury Boulevard (which becomes Stillwell Road within Fort Monroe), and Eustis Lane. The proposed reuse plan identifies reconfiguring the entrance to increase capacity, enhance emergency access and evacuation routes, as well as provide a more direct orientation for the various users of Fort Monroe. **Figure 11** illustrates the proposed entrance configuration which has a proposed signal located at the intersections of Mercury Boulevard and Mellen Street, Eustis Lane and Ingalls Road, and Eustis Lane with Stillwell Road. The remaining three intersections will continue to be unsignalized.

Figure 11: Proposed Internal Fort Monroe Entrance



Based on the anticipated trip generation, distribution, and assignment of the proposed redevelopment, all intersections are anticipated to operate at acceptable LOS during all three peak periods. In order to sustain adequate LOS at the intersections with Mallory Street, appropriate signage is recommended within Fort Monroe directing trips to Mercury Boulevard, which is an existing four-lane roadway as compared to Mellen Street, which is only a two-lane roadway.

4.0 Conclusions and Recommendations

Based on recommendations set forth by the BRAC, Fort Monroe will be vacated by the Army by 2011. In order to promote the proper development and reuse of Fort Monroe, the FMFADA established a reuse plan to provide the level of mobility needed to support redevelopment of surrounding lands, preserve historical significance, and improve the access to the recreational opportunities that exist on Fort Monroe.

The proposed reuse of Fort Monroe will increase traffic volumes along the local City of Hampton street network. Analysis illustrated that operations will deteriorate, however adequate overall traffic operations along Mallory Street and Woodland Road can be achieved with recommended transportation infrastructure improvements in conjunction with optimized signal timings, as illustrated in **Figure 12**. With these improvements, potential queuing at local street intersections providing direct access to/from I-64 are eliminated. A description of the necessary transportation infrastructure improvements to address potential traffic impacts from the Fort Monroe Reuse Plan is outlined below:

Mallory Street/I-64 Westbound Ramps

- Restripe the southbound approach to include an exclusive left-turn lane (250 feet of storage), and a shared through and right-turn lane.
- Construct an exclusive right-turn lane along the westbound approach.

Mallory Street/Mellen Street

- Construct an exclusive left-turn lane along the northbound approach. This recommendation would create dual left-turning movements and provided acceptable LOS at this key intersection.

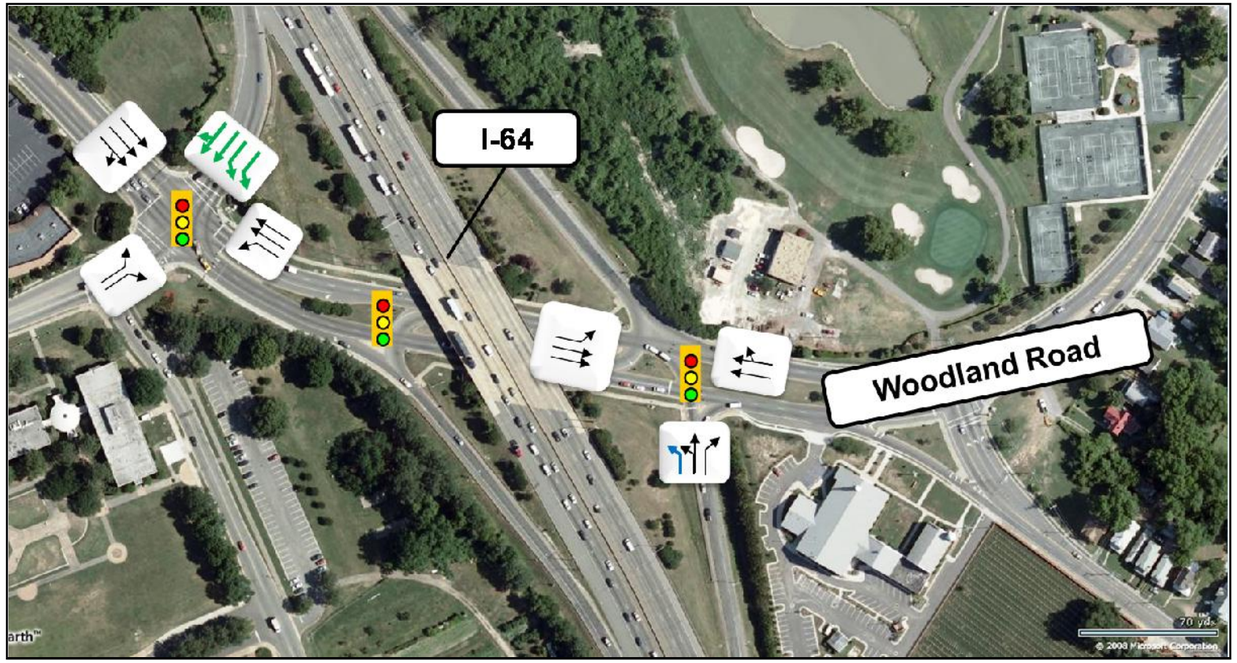
- Given the location of this key intersection, along with the characteristics of the corridor (i.e closely spaced cross streets and close proximity between I-64 to the east and Mercury Boulevard to the west), corridor improvements are required beyond the limits of this specific intersection. One such improvement includes widening Mallory Street from two to four lanes between the I-64 interchange and Mercury Boulevard.

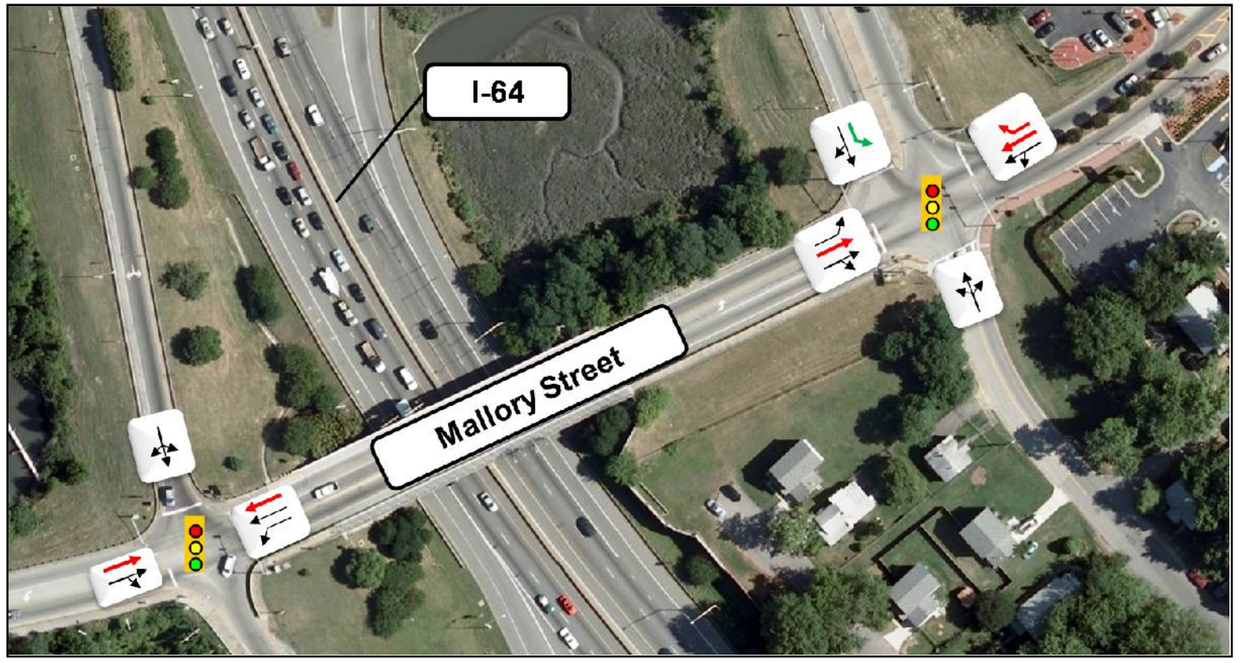
Woodland Road/I-64 Westbound Ramps

- Restripe the northbound approach to include an exclusive left-turn lane (200 feet of storage), a shared through and left-turn lane, and an exclusive channelized right-turn lane (yield controlled).

Woodland Road/I-64 Eastbound Ramps/Tyler Street

- Restripe the southbound approach to include two exclusive left-turn lanes (200 feet of storage), an exclusive through lane, and a shared through and right-turn lane.



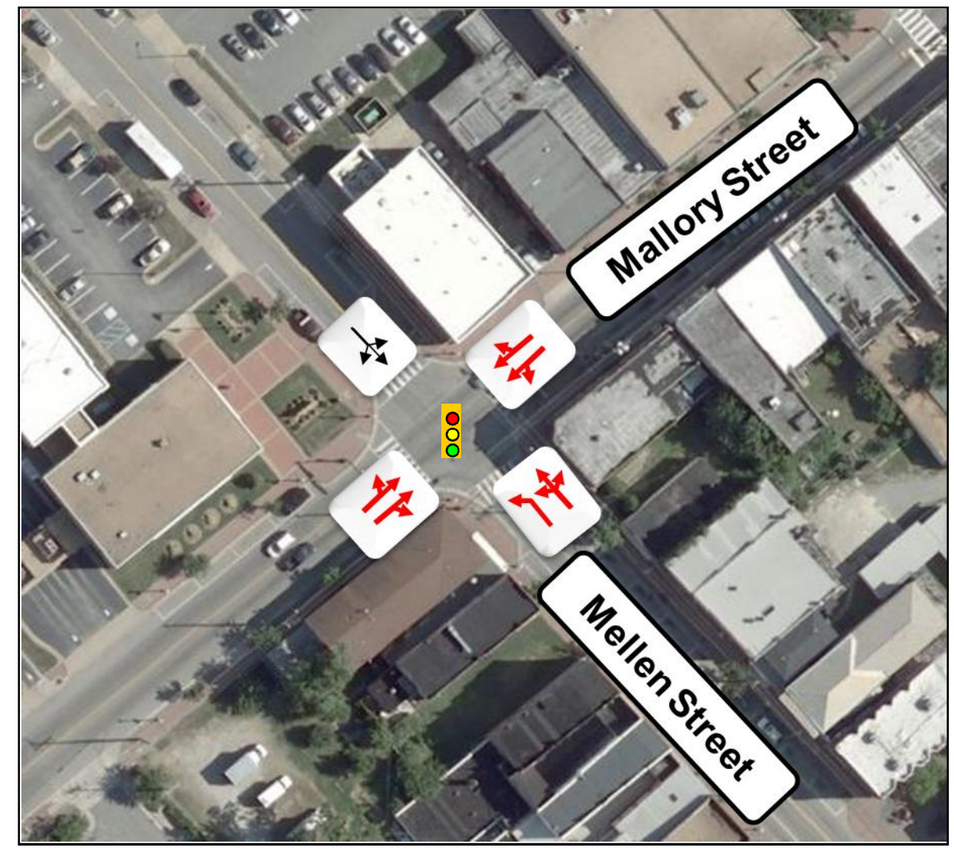


LEGEND

-No Additional ROW Needed =
-May Need Additional ROW =
-Needs Additional ROW =

Other Modifications Needed:
-Increase in Cycle Length
-Phasing Sequence

North



Kimley-Horn and Associates, Inc.

Fort Monroe EIS
Traffic Analysis
Hampton, Virginia

Proposed Improvements

FIGURE
12

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

APPENDIX

Fort Monroe Management Zones

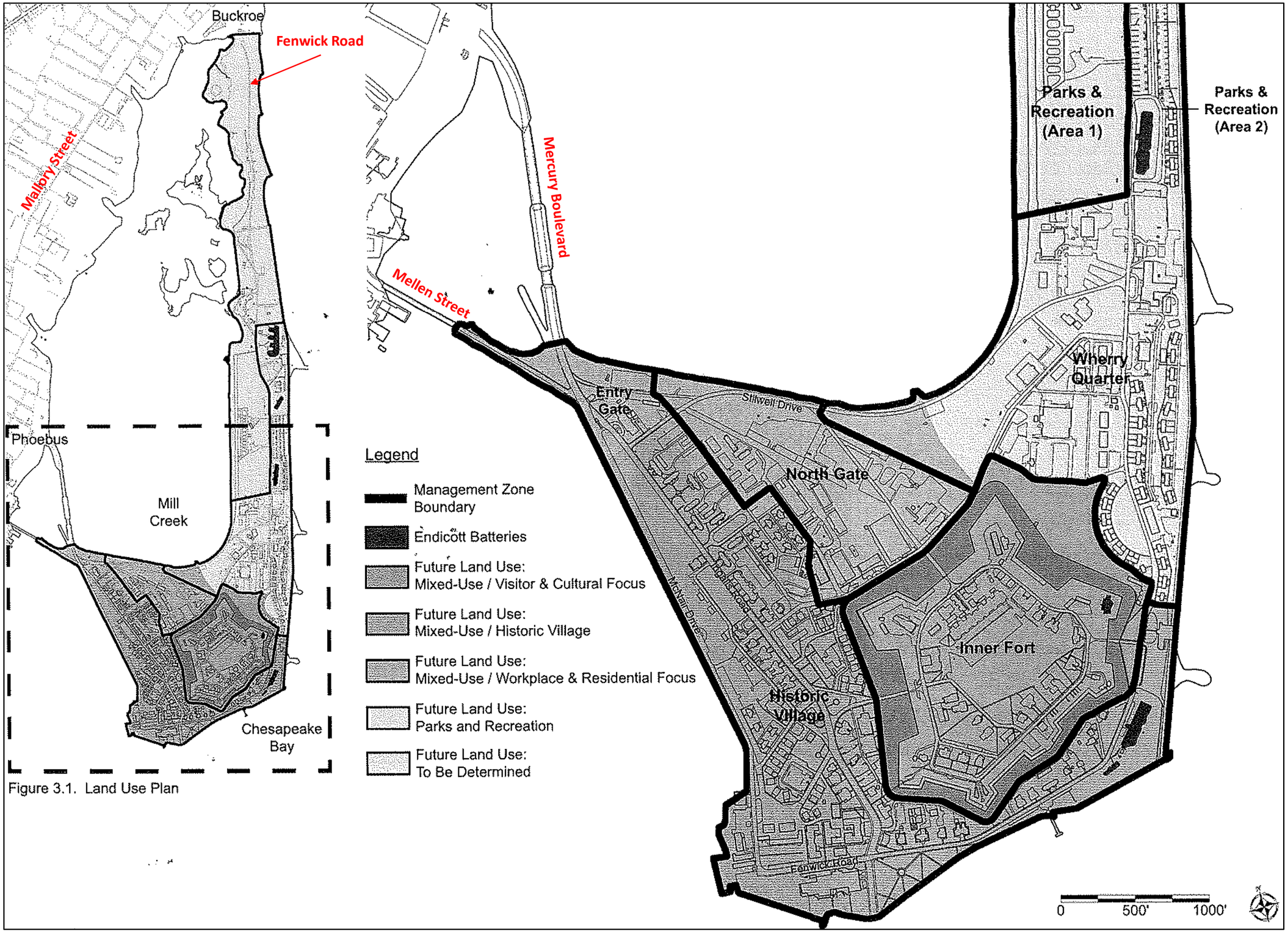


Figure 3.1. Land Use Plan

Existing Traffic Counts

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:11/7/2008

Site Ref: Exit 267
Site ID: 000000010653
Loc: I-64 EB On from Settlers Landing
Direction: EAST

File: D1107001.prn
Info: Ft. Monroe
GPS: 37.02296 76.32963

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
	10		11		12		13		07		8		9					
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15	17	76	20	69	9	70	16	57	19	72	35	72	27	61	143	477	20	68
00:30	18	81	9	72	20	88	20	78	24	95	29	85	20	56	140	555	20	79
00:45	15	73	17	67	13	87	14	76	18	75	23	56	24	56	124	490	17	70
01:00	19	63	16	65	7	65	10	65	15	76	26	67	23	68	116	469	16	67
01:15	6	55	7	71	7	68	11	69	16	85	25	92	16	66	88	506	12	72
01:30	12	88	5	83	12	81	10	74	11	51	16	106	31	61	97	544	13	77
01:45	15	67	7	73	7	72	12	71	12	81	13	80	12	63	78	507	11	72
02:00	9	54	8	72	9	80	6	75	11	61	14	75	16	73	73	490	10	70
02:15	7	73	5	50	4	72	8	76	9	84	18	63	18	65	69	483	9	69
02:30	2	76	11	71	10	78	8	69	13	91	22	74	12	76	78	535	11	76
02:45	6	63	7	72	4	66	6	57	13	78	16	95	15	75	67	506	9	72
03:00	9	56	7	65	13	73	10	70	6	92	10	93	17	93	72	542	10	77
03:15	6	89	7	92	7	84	7	90	9	115	10	78	10	86	56	634	8	90
03:30	3	90	11	108	7	102	9	102	11	141	14	71	22	69	77	683	11	97
03:45	9	118	6	85	3	111	8	92	6	145	14	72	13	65	59	688	8	98
04:00	7	104	6	98	11	99	9	106	10	87	13	58	12	52	68	604	9	86
04:15	9	99	9	110	7	107	7	100	13	128	9	79	11	72	65	695	9	99
04:30	8	87	10	94	12	106	8	99	17	199	8	85	7	57	70	727	10	103
04:45	16	117	14	94	20	120	13	77	12	173	13	111	14	70	102	762	14	108
05:00	25	91	18	99	31	105	35	81	42	186	19	75	11	79	181	716	25	102
05:15	37	120	23	105	41	114	48	103	49	194	18	97	14	85	230	818	32	116
05:30	50	95	39	99	73	121	65	100	68	178	23	80	15	72	333	745	47	106
05:45	80	88	46	97	98	78	89	91	99	152	32	90	21	105	465	701	66	100
06:00	113	84	74	64	119	75	131	65	125	141	23	121	16	59	601	609	85	87
06:15	113	69	79	58	150	82	128	81	128	90	36	92	24	59	658	531	94	75
06:30	168	73	104	88	172	69	172	66	168	114	59	87	23	64	866	561	123	80
06:45	135	63	111	57	174	70	169	61	137	138	60	70	41	55	827	514	118	73
07:00	129	44	101	50	165	54	157	58	160	104	51	60	25	42	788	412	112	58
07:15	180	39	124	45	197	53	198	47	195	78	49	56	21	44	964	362	137	51
07:30	31	53	125	46	196	53	224	43	191	70	49	40	21	43	837	348	119	49
07:45	188	43	103	40	208	46	203	29	151	63	62	33	33	49	948	303	135	43
08:00	193	34	122	43	168	38	150	52	145	50	49	59	34	46	861	322	123	46
08:15	122	38	108	32	134	35	129	32	136	63	51	59	30	39	710	298	101	42
08:30	185	35	91	23	134	39	118	42	130	46	68	60	30	47	756	292	108	41
08:45	132	39	77	38	109	34	128	30	118	51	70	57	26	45	660	294	94	42
09:00	97	28	79	38	91	38	105	43	95	58	60	63	27	46	554	314	79	44
09:15	69	44	82	43	81	23	77	43	76	61	44	64	41	31	470	309	67	44
09:30	69	36	78	46	64	40	83	34	94	48	62	58	44	37	494	299	70	42
09:45	76	41	81	35	109	41	69	42	83	50	69	39	46	32	533	280	76	40
10:00	82	33	61	30	78	25	65	20	55	48	71	54	37	35	449	245	64	35
10:15	63	28	70	43	87	39	68	39	59	49	68	62	56	47	471	307	67	43
10:30	67	21	80	36	84	34	63	33	71	42	66	52	54	35	485	253	69	36
10:45	81	19	68	27	61	34	84	36	76	45	74	53	58	36	502	250	71	35
11:00	50	28	78	26	69	28	63	22	73	46	59	40	59	21	451	211	64	30
11:15	59	14	68	15	55	11	70	20	83	49	54	48	61	29	450	186	64	26
11:30	53	23	73	20	72	21	56	25	59	29	69	59	49	22	431	199	61	28
11:45	83	19	75	20	86	17	54	18	79	35	87	45	49	19	513	173	73	24
12:00	58	16	57	21	77	20	74	18	57	35	71	34	53	25	447	169	63	24
TOTALS	5868		5372		6431		6144		7489		5220		3971		40495		5746	
AM Times	7:45		7:15		7:15		7:00		7:00		11:15		10:30		7:15		7:15	
AM Peaks	688		474		769		782		697		281		232		3610		514	
PM Times	16:45		15:30		16:45		15:30		16:30		17:45		17:00		16:45		16:45	
PM Peaks	423		401		460		400		752		390		341		3041		432	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:11/7/2008

Site Ref: Exit 268
Site ID: 000000010754
Loc: I-64 WB Off to Mallory
Direction: WEST

File: D1107044.prn
Info: Ft. Monroe
GPS: 37.01730 76.32647

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
	10		11		12		13		07		8		9					
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15	13	39	8	42	12	27	12	42	15	40	14	52	11	23	85	265	12	37
00:30	10	40	5	30	7	39	4	51	9	51	14	38	11	31	60	280	8	40
00:45	7	51	11	35	6	49	9	44	4	53	7	31	11	29	55	292	7	41
01:00	5	32	4	29	9	45	9	52	11	57	7	34	12	37	57	286	8	40
01:15	0	45	3	30	3	38	6	49	4	52	4	29	4	22	24	265	3	37
01:30	4	53	4	32	6	45	7	37	4	43	7	40	8	25	40	275	5	39
01:45	4	38	7	25	4	44	6	48	5	52	7	35	13	31	46	273	6	39
02:00	1	30	6	28	0	54	4	46	7	42	4	29	9	38	31	267	4	38
02:15	4	28	3	19	6	40	3	45	4	40	8	27	16	36	44	235	6	33
02:30	3	51	3	24	6	33	3	34	5	43	18	30	17	29	55	244	7	34
02:45	4	30	3	32	2	51	5	45	5	53	3	29	17	21	39	261	5	37
03:00	6	42	2	31	1	44	2	37	8	54	6	36	5	33	30	277	4	39
03:15	1	43	4	45	3	62	1	44	4	34	9	32	8	28	30	288	4	41
03:30	0	28	2	34	1	47	0	41	0	30	4	36	2	26	9	242	1	34
03:45	1	55	0	30	1	45	2	32	1	47	4	35	3	31	12	275	1	39
04:00	1	45	3	38	9	53	6	33	2	45	5	37	2	35	28	286	4	40
04:15	2	45	2	28	0	44	2	47	4	41	6	34	2	28	18	267	2	38
04:30	2	42	1	40	5	46	3	32	1	40	11	44	8	22	31	266	4	38
04:45	4	39	2	38	5	41	4	39	4	42	2	45	1	24	22	268	3	38
05:00	8	31	10	30	7	48	4	50	8	38	5	36	9	32	51	265	7	37
05:15	13	46	6	32	10	32	12	50	10	44	6	18	4	24	61	246	8	35
05:30	18	32	11	46	16	39	10	32	10	46	8	41	4	19	77	255	11	36
05:45	21	50	11	45	19	50	26	41	16	46	6	20	9	18	108	270	15	38
06:00	36	41	14	43	42	38	29	29	23	23	8	26	10	26	162	226	23	32
06:15	57	27	20	37	62	37	33	31	36	42	9	14	10	26	227	214	32	30
06:30	68	30	34	27	66	39	49	29	36	48	12	28	17	21	282	222	40	31
06:45	69	30	32	31	84	36	66	28	57	30	17	25	8	16	333	196	47	28
07:00	23	34	42	24	84	26	78	28	71	28	15	20	3	16	316	176	45	25
07:15	35	26	36	16	109	42	84	29	92	24	22	23	13	22	391	182	55	26
07:30	41	6	32	43	116	34	96	17	91	32	18	21	13	18	407	171	58	24
07:45	46	22	34	25	105	26	86	16	95	35	19	25	14	19	399	168	57	24
08:00	56	24	33	23	110	20	103	20	91	31	21	22	11	16	425	156	60	22
08:15	116	21	35	15	95	13	83	24	80	14	18	16	13	18	440	121	62	17
08:30	90	20	19	11	71	25	74	17	70	16	19	12	13	22	356	123	50	17
08:45	33	25	27	12	69	27	59	10	63	16	19	15	16	20	286	125	40	17
09:00	85	33	36	25	55	18	59	18	86	15	19	15	16	19	356	143	50	20
09:15	81	19	29	23	48	19	54	13	41	26	20	17	15	11	288	128	41	18
09:30	91	13	34	21	48	19	44	21	59	11	16	14	20	10	312	109	44	15
09:45	72	21	16	17	44	22	47	17	41	27	13	22	17	6	250	132	35	18
10:00	42	20	25	21	44	23	47	11	37	31	17	21	20	13	232	140	33	20
10:15	33	25	28	15	45	25	7	13	40	14	30	21	21	10	204	123	29	17
10:30	53	20	32	14	34	18	64	22	58	22	35	19	27	11	303	126	43	18
10:45	42	15	44	11	31	12	49	15	28	14	25	14	19	18	238	99	34	14
11:00	38	8	33	11	48	14	39	5	40	17	64	12	26	11	288	78	41	11
11:15	39	7	28	10	37	12	38	13	38	13	35	12	14	7	229	74	32	10
11:30	31	17	29	10	29	14	36	15	34	19	26	25	19	13	204	113	29	16
11:45	40	10	34	6	34	12	42	4	45	17	44	18	22	9	261	76	37	10
12:00	36	23	30	20	40	17	36	9	45	15	53	19	12	18	252	121	36	17
TOTALS	2957		2141		3292		2967		3151		2023		1613		18144		2553	
AM Times	9:00		6:30		7:15		7:15		7:15		11:00		10:15		7:30		7:30	
AM Peaks	329		144		440		369		369		169		93		1671		237	
PM Times	15:45		17:30		15:15		12:30		12:30		16:00		13:45		12:15		12:15	
PM Peaks	187		171		207		196		213		160		134		1123		158	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:11/7/2008

Site Ref: Exit 268
Site ID: 000000010663
Loc: I-64 EB Off to Mallory/Franklin
Direction: EAST

File: D1107002.prn
Info: Ft. Monroe
GPS: 37.01740 76.32817

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
	10		11		12		13		07		8		9					
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15	17	67	24	38	14	72	17	68	27	69	30	53	34	42	163	409	23	58
00:30	14	84	19	48	20	72	17	80	23	75	27	52	22	58	142	469	20	67
00:45	15	77	11	51	17	72	18	86	16	55	20	46	20	57	117	444	16	63
01:00	18	66	11	64	7	88	22	79	16	98	18	68	18	54	110	517	15	73
01:15	5	82	17	55	12	77	17	56	14	78	27	60	16	52	108	460	15	65
01:30	10	70	7	63	11	58	8	69	11	68	14	53	13	51	74	432	10	61
01:45	9	63	7	66	7	50	11	67	13	54	15	48	12	51	74	399	10	57
02:00	9	62	10	50	15	68	10	60	12	61	14	39	14	47	84	387	12	55
02:15	10	63	6	44	10	69	8	57	8	62	21	44	12	46	75	385	10	55
02:30	2	66	12	58	11	59	7	58	14	62	9	41	12	49	67	393	9	56
02:45	5	60	4	57	5	76	8	53	12	63	12	43	16	50	62	402	8	57
03:00	5	68	3	65	5	68	12	59	4	68	18	55	10	59	57	442	8	63
03:15	4	63	5	71	6	76	4	59	4	65	10	50	11	46	44	430	6	61
03:30	2	81	3	61	5	77	5	68	8	56	11	57	18	71	52	471	7	67
03:45	9	77	9	85	2	69	3	66	4	30	18	62	7	60	52	449	7	64
04:00	8	81	8	60	7	80	9	60	11	20	8	56	10	47	61	404	8	57
04:15	8	45	6	75	4	63	8	59	7	15	4	51	5	38	42	346	6	49
04:30	5	66	2	57	4	62	4	57	3	28	7	50	5	47	30	367	4	52
04:45	10	61	11	56	8	54	6	51	9	30	11	62	6	43	61	357	8	51
05:00	11	64	4	73	9	81	11	64	12	22	6	57	6	58	59	419	8	59
05:15	12	76	10	59	11	65	12	78	13	24	10	53	8	58	76	413	10	59
05:30	13	73	16	72	21	69	17	86	20	32	15	46	8	46	110	424	15	60
05:45	23	75	15	82	32	64	22	90	34	29	9	42	6	54	141	436	20	62
06:00	66	56	21	67	42	78	71	71	53	21	15	53	5	59	273	405	39	57
06:15	88	58	21	53	76	50	70	51	54	23	14	52	6	41	329	328	47	46
06:30	69	63	16	70	79	60	76	67	63	24	22	44	5	43	330	371	47	53
06:45	52	57	30	34	45	74	69	43	54	27	15	38	7	38	272	311	38	44
07:00	109	51	41	46	80	64	114	55	112	35	27	32	14	37	497	320	71	45
07:15	102	44	37	42	66	55	68	47	122	42	16	39	22	32	433	301	61	43
07:30	27	48	57	45	51	53	59	39	157	56	42	40	33	48	426	329	60	47
07:45	15	44	53	49	61	40	57	37	101	61	50	40	32	33	369	304	52	43
08:00	37	28	49	43	74	40	142	37	133	36	32	36	21	36	488	256	69	36
08:15	25	41	49	50	128	34	151	45	125	50	27	51	17	40	522	311	74	44
08:30	46	33	40	29	111	39	120	44	101	38	32	36	22	40	472	259	67	37
08:45	50	31	43	25	99	28	82	28	107	49	33	34	28	39	442	234	63	33
09:00	88	31	51	43	89	32	102	39	77	39	45	35	32	36	484	255	69	36
09:15	52	30	46	32	92	36	75	34	70	44	31	38	37	31	403	245	57	35
09:30	69	36	51	33	24	29	54	48	63	41	37	31	49	24	347	242	49	34
09:45	73	23	55	40	35	30	54	42	73	37	40	39	45	21	375	232	53	33
10:00	60	40	33	29	56	32	58	41	76	43	51	34	45	18	379	237	54	33
10:15	69	34	45	36	76	45	57	32	61	43	51	29	38	25	397	244	56	34
10:30	57	29	52	30	58	27	71	23	62	40	46	34	36	30	382	213	54	30
10:45	65	25	57	28	55	23	64	30	66	23	49	36	45	27	401	192	57	27
11:00	59	19	53	8	62	22	61	13	63	38	39	28	61	17	398	145	56	20
11:15	46	16	47	20	67	9	59	23	58	33	46	22	44	26	367	149	52	21
11:30	62	27	43	30	61	25	60	17	49	32	45	30	40	20	360	181	51	25
11:45	67	29	43	29	61	16	52	14	50	37	41	43	41	27	355	195	50	27
12:00	56	28	63	30	56	23	73	25	73	28	41	25	38	20	400	179	57	25
TOTALS	4244		3667		4500		4650		4422		3328		3044		27855		3937	
AM Times	6:30		10:30		8:15		8:00		7:30		10:00		10:45		8:00		8:00	
AM Peaks	332		209		427		495		516		197		190		1924		273	
PM Times	12:30		17:00		12:30		17:15		12:30		13:00		15:00		12:30		12:30	
PM Peaks	309		286		309		325		306		229		236		1890		268	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:11/7/2008

Site Ref: Exit 268
Site ID: 000000010757
Loc: I-64 EB On from Mallory/Franklin
Direction: EAST

File: D1107003.prn
Info: Ft. Monroe
GPS: 37.01537 76.32742

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
	10		11		12		13		07		8		9					
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15	5	50	12	36	11	40	5	52	6	49	10	34	7	28	56	289	8	41
00:30	1	38	5	33	4	51	11	61	3	46	14	47	5	34	43	310	6	44
00:45	0	40	2	34	5	36	2	43	2	37	9	25	3	31	23	246	3	35
01:00	2	39	2	35	3	41	4	44	2	47	4	30	7	30	24	266	3	38
01:15	4	53	1	28	0	51	2	44	4	50	5	66	4	24	20	316	2	45
01:30	2	52	2	36	2	44	3	47	5	45	6	53	0	39	20	316	2	45
01:45	1	40	2	28	2	44	3	45	4	52	2	45	5	35	19	289	2	41
02:00	6	33	3	36	8	54	4	57	1	55	3	37	10	35	35	307	5	43
02:15	4	56	4	32	4	58	2	63	3	67	6	30	3	28	26	334	3	47
02:30	3	49	1	38	1	49	5	55	2	47	2	35	3	42	17	315	2	45
02:45	2	56	3	25	3	60	2	55	5	71	6	37	2	41	23	345	3	49
03:00	2	72	5	37	2	88	1	93	2	74	7	39	2	27	21	430	3	61
03:15	4	54	2	52	3	45	4	57	2	90	3	28	0	33	18	359	2	51
03:30	3	79	2	42	6	99	4	82	3	157	5	29	2	29	25	517	3	73
03:45	1	74	1	72	0	104	2	83	1	112	4	28	1	33	10	506	1	72
04:00	1	108	5	59	5	134	3	114	4	221	4	30	4	38	26	704	3	100
04:15	7	95	4	53	9	107	4	103	8	251	5	24	3	28	40	661	5	94
04:30	6	118	4	36	5	132	9	108	4	236	4	40	6	25	38	695	5	99
04:45	13	92	2	38	15	108	16	99	16	229	8	24	7	25	77	615	11	87
05:00	17	86	9	55	27	108	21	94	24	205	7	22	3	24	108	594	15	84
05:15	21	91	23	48	20	94	24	85	30	230	5	28	3	31	126	607	18	86
05:30	27	60	19	29	35	74	36	72	28	171	11	48	12	21	168	475	24	67
05:45	33	52	19	36	50	70	44	52	37	167	9	45	5	22	197	444	28	63
06:00	63	42	41	26	64	54	64	42	67	62	19	27	9	31	327	284	46	40
06:15	66	29	63	23	79	48	90	41	74	229	23	22	21	22	416	414	59	59
06:30	87	29	52	24	140	34	92	25	91	126	30	33	13	16	505	287	72	41
06:45	88	30	54	17	136	25	110	27	101	96	22	22	7	18	518	235	74	33
07:00	112	14	53	16	174	22	174	33	109	36	19	19	14	18	655	158	93	22
07:15	48	13	87	14	189	21	208	10	144	37	31	20	8	22	715	137	102	19
07:30	288	19	81	17	168	16	169	11	140	25	20	16	22	17	888	121	126	17
07:45	183	21	67	13	147	17	113	20	94	20	13	25	8	14	625	130	89	18
08:00	179	13	73	12	106	22	98	9	77	26	37	19	21	16	591	117	84	16
08:15	138	14	40	11	91	19	92	12	62	18	31	28	17	15	471	117	67	16
08:30	97	8	55	11	59	15	89	15	63	21	30	15	22	14	415	99	59	14
08:45	52	14	40	17	60	21	62	17	60	16	32	20	16	12	322	117	46	16
09:00	39	13	47	15	58	27	38	12	57	10	26	27	23	7	288	111	41	15
09:15	44	12	29	15	79	14	42	6	67	20	23	19	22	18	306	104	43	14
09:30	48	13	32	11	84	9	40	26	50	13	32	17	30	9	316	98	45	14
09:45	40	6	29	4	63	4	36	14	54	16	40	18	26	8	288	70	41	10
10:00	48	11	29	18	46	15	38	13	47	18	20	18	15	17	243	110	34	15
10:15	36	11	31	4	83	12	51	10	66	16	28	15	24	8	319	76	45	10
10:30	35	6	26	8	64	6	33	13	56	17	30	19	20	9	264	78	37	11
10:45	45	9	35	3	46	7	47	9	61	19	29	17	16	8	279	72	39	10
11:00	43	11	38	9	62	8	49	5	60	10	32	15	19	12	303	70	43	10
11:15	59	6	32	5	59	10	51	10	47	10	35	17	23	8	306	66	43	9
11:30	51	4	33	7	57	4	58	3	53	6	31	13	22	5	305	42	43	6
11:45	50	10	35	6	59	4	50	9	69	11	35	10	21	11	319	61	45	8
12:00	71	12	36	10	53	9	58	16	68	21	35	14	23	11	344	93	49	13
TOTALS	4032		2504		4580		4179		5641		2151		1608		24695		3488	
AM Times	7:30		7:15		7:00		7:00		6:45		11:15		9:00		7:00		7:00	
AM Peaks	788		308		678		664		494		136		101		2883		410	
PM Times	16:00		15:30		16:00		16:00		16:00		13:15		14:00		16:00		16:00	
PM Peaks	413		226		481		424		937		201		146		2675		380	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:11/7/2008

Site Ref: Exit 268
Site ID: 000000010754
Loc: I-64 WB On from Mallory
Direction: WEST

File: D1107004.prn
Info: Ft. Monroe
GPS: 37.01730 76.32647

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
	10		11		12		13		07		8		9					
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15	35	108	29	76	35	107	25	99	36	124	35	89	32	83	227	686	32	98
00:30	20	95	25	92	15	90	23	116	24	101	36	88	28	89	171	671	24	95
00:45	18	95	12	93	20	102	12	81	22	98	25	73	18	91	127	633	18	90
01:00	12	88	17	70	9	74	16	81	14	94	23	71	34	83	125	561	17	80
01:15	8	86	16	72	7	99	15	76	18	85	24	68	24	68	112	554	16	79
01:30	7	88	12	73	9	90	14	79	17	88	15	65	23	60	97	543	13	77
01:45	14	72	10	73	6	78	13	75	8	86	27	72	18	49	96	505	13	72
02:00	5	71	7	85	12	77	9	90	12	109	12	63	15	83	72	578	10	82
02:15	8	101	8	64	8	76	5	105	10	95	9	57	14	74	62	572	8	81
02:30	3	105	5	76	8	88	9	78	5	105	18	62	14	62	62	576	8	82
02:45	3	117	4	81	1	113	14	95	11	108	9	55	12	63	54	632	7	90
03:00	7	115	8	82	7	96	8	97	8	110	14	71	17	88	69	659	9	94
03:15	5	143	3	95	5	124	5	115	9	148	14	62	12	54	53	741	7	105
03:30	8	123	6	78	7	135	4	108	9	127	6	63	9	74	49	708	7	101
03:45	6	181	6	94	6	149	5	148	11	161	9	68	7	75	50	876	7	125
04:00	5	116	3	67	9	144	7	161	7	136	7	62	6	78	44	764	6	109
04:15	5	185	5	111	8	249	5	229	4	166	7	74	7	96	41	1110	5	158
04:30	9	152	9	72	7	181	6	163	11	159	11	74	15	67	68	868	9	124
04:45	16	226	13	88	10	266	16	241	14	231	24	70	8	66	101	1188	14	169
05:00	15	133	15	81	16	246	14	214	17	196	13	79	8	49	98	998	14	142
05:15	8	150	17	109	15	237	11	227	27	188	8	59	7	60	93	1030	13	147
05:30	34	157	40	66	40	222	36	181	31	162	25	58	18	64	224	910	32	130
05:45	49	106	43	60	53	183	56	150	41	140	24	63	17	41	283	743	40	106
06:00	33	89	34	48	44	146	35	118	34	112	9	59	16	43	205	615	29	87
06:15	52	79	46	47	54	108	59	103	62	86	19	62	14	52	306	537	43	76
06:30	72	50	57	59	64	98	61	81	69	95	31	50	12	35	366	468	52	66
06:45	70	63	52	49	69	83	92	64	84	78	30	61	17	34	414	432	59	61
07:00	78	47	65	37	66	77	68	72	76	77	32	63	18	45	403	418	57	59
07:15	82	27	72	37	79	63	87	74	70	72	41	52	7	40	438	365	62	52
07:30	62	44	90	34	110	62	99	60	91	66	40	42	29	33	521	341	74	48
07:45	100	43	111	28	135	46	139	70	90	59	39	39	19	34	633	319	90	45
08:00	144	35	106	56	131	46	132	53	99	44	54	41	34	32	700	307	100	43
08:15	128	43	91	41	125	41	110	60	89	53	59	42	30	49	632	329	90	47
08:30	102	46	63	35	101	41	98	50	105	27	47	41	39	28	555	268	79	38
08:45	80	33	46	49	97	42	89	43	89	39	52	42	38	35	491	283	70	40
09:00	71	36	67	40	74	47	88	42	85	29	57	32	45	44	487	270	69	38
09:15	88	29	61	42	78	69	75	31	107	45	50	31	40	23	499	270	71	38
09:30	75	27	69	27	109	42	74	46	87	43	51	41	52	36	517	262	73	37
09:45	87	28	82	25	73	39	89	80	68	45	51	41	39	28	489	286	69	40
10:00	88	24	70	29	89	36	61	39	91	42	73	31	38	27	510	228	72	32
10:15	68	32	69	30	107	38	79	45	77	27	58	44	58	30	516	246	73	35
10:30	75	29	71	29	73	33	70	25	82	29	65	30	49	29	485	204	69	29
10:45	84	23	57	27	76	27	89	34	91	51	68	36	83	27	548	225	78	32
11:00	76	25	61	25	102	18	79	25	88	37	81	28	59	23	546	181	78	25
11:15	75	22	60	20	99	24	71	28	79	34	59	26	64	20	507	174	72	24
11:30	87	15	61	18	102	20	107	21	89	38	74	36	58	14	578	162	82	23
11:45	101	14	61	16	117	24	99	15	113	32	75	23	61	21	627	145	89	20
12:00	110	17	64	22	95	25	115	27	129	35	73	25	56	16	642	167	91	23
TOTALS	6121		4727		7103		6808		6822		4267		3753		39601		5614	
AM Times	7:45		7:30		7:30		7:30		11:15		11:00		10:45		7:45		7:45	
AM Peaks	474		398		501		480		410		289		264		2520		359	
PM Times	16:15		16:15		16:45		16:45		16:45		12:15		12:15		16:15		16:15	
PM Peaks	696		352		971		863		777		321		346		4164		593	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:11/7/2008

Site Ref: Exit 267
Site ID: 000000010742
Loc: I-64 WB Off to Settlers Landing
Direction: WEST

File: D1107005.prn
Info: Ft. Monroe
GPS: 37.02233 76.32835

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
	10		11		12		13		07		8		9					
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15	31	70	26	63	28	63	29	85	27	80	50	86	40	38	231	485	33	69
00:30	28	52	26	66	17	67	21	64	32	92	38	58	39	55	201	454	28	64
00:45	14	72	23	79	25	69	13	63	23	73	42	72	28	60	168	488	24	69
01:00	19	60	22	66	6	79	19	81	21	79	40	69	42	64	169	498	24	71
01:15	14	65	9	69	9	55	19	67	25	68	36	69	33	52	145	445	20	63
01:30	12	53	11	60	5	79	17	57	14	80	27	33	35	56	121	418	17	59
01:45	10	68	10	57	5	67	14	77	16	83	28	1	27	78	110	431	15	61
02:00	4	67	11	52	9	70	8	78	19	75	17	39	24	69	92	450	13	64
02:15	9	64	16	47	9	68	11	64	8	83	36	75	33	96	122	497	17	71
02:30	4	86	6	90	11	75	12	85	17	109	30	66	56	86	136	597	19	85
02:45	8	85	11	60	7	67	10	86	13	109	20	69	33	57	102	533	14	76
03:00	6	79	5	72	4	87	4	86	16	100	27	93	19	62	81	579	11	82
03:15	2	82	5	77	8	88	7	79	6	96	16	77	33	69	77	568	11	81
03:30	7	108	7	101	5	114	6	113	8	99	13	96	18	60	64	691	9	98
03:45	4	126	2	88	7	131	2	103	5	123	19	88	20	82	59	741	8	105
04:00	7	119	0	110	6	116	5	123	4	138	6	74	18	68	46	748	6	106
04:15	2	124	5	100	2	183	3	149	7	120	5	111	7	91	31	878	4	125
04:30	3	107	5	106	5	139	2	113	6	91	6	86	10	60	37	702	5	100
04:45	1	120	5	94	4	142	6	138	8	117	9	98	5	62	38	771	5	110
05:00	9	114	4	105	3	144	5	141	6	125	11	93	11	60	49	782	7	111
05:15	5	121	8	92	9	128	4	128	5	128	11	62	6	76	48	735	6	105
05:30	10	114	9	115	7	142	9	156	21	127	11	88	11	69	78	811	11	115
05:45	18	115	19	129	23	143	12	145	9	134	5	98	7	64	93	828	13	118
06:00	21	125	21	98	32	137	32	123	20	77	11	73	2	73	139	706	19	100
06:15	30	110	27	87	35	115	43	106	44	86	9	79	7	74	195	657	27	93
06:30	37	91	32	91	43	94	36	111	36	104	23	64	9	60	216	615	30	87
06:45	41	87	27	78	42	98	42	79	46	96	34	65	12	60	244	563	34	80
07:00	23	88	41	68	51	83	47	84	51	97	18	67	14	51	245	538	35	76
07:15	14	75	60	62	64	74	65	80	54	91	25	67	7	63	289	512	41	73
07:30	40	86	56	79	64	67	67	71	71	67	29	68	15	66	342	504	48	72
07:45	28	44	67	73	62	68	76	59	62	77	36	50	28	40	359	411	51	58
08:00	40	53	65	32	67	50	86	66	69	62	28	43	26	50	381	356	54	50
08:15	75	51	58	58	86	56	61	52	55	68	47	40	31	46	413	371	59	53
08:30	82	39	62	59	69	61	77	48	85	67	42	50	26	33	443	357	63	51
08:45	27	35	49	51	102	66	71	61	70	66	42	62	25	37	386	378	55	54
09:00	70	76	64	62	80	62	55	55	75	51	43	45	30	51	417	402	59	57
09:15	89	46	45	38	57	59	66	40	68	53	41	56	37	34	403	326	57	46
09:30	93	60	57	56	60	70	66	51	71	58	45	43	37	35	429	373	61	53
09:45	83	52	49	67	49	57	65	54	63	63	46	52	46	46	401	391	57	55
10:00	63	40	54	47	69	46	58	39	52	59	37	63	56	33	389	327	55	46
10:15	51	37	48	43	65	45	23	45	61	41	69	54	56	31	373	296	53	42
10:30	50	47	60	48	51	39	69	39	60	70	88	51	47	37	425	331	60	47
10:45	73	33	59	31	63	38	89	31	60	61	63	53	61	31	468	278	66	39
11:00	56	42	68	40	68	34	46	40	65	61	78	49	43	43	424	309	60	44
11:15	62	35	49	28	60	25	69	43	59	38	93	49	42	28	434	246	62	35
11:30	57	25	40	23	72	40	58	34	76	49	67	57	39	28	409	256	58	36
11:45	58	21	50	31	61	29	47	22	63	45	80	41	45	29	404	218	57	31
12:00	52	19	55	17	58	30	72	28	77	33	90	55	46	29	450	211	64	30
TOTALS	5030		4773		5603		5466		5798		4784		3984		35438		5021	
AM Times	9:00		7:45		8:15		7:45		8:30		11:15		10:00		10:30		10:30	
AM Peaks	335		252		337		300		298		330		220		1751		248	
PM Times	15:30		17:00		16:15		17:00		17:00		16:15		13:45		17:00		17:00	
PM Peaks	477		441		608		570		514		388		329		3156		449	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:11/7/2008

Site Ref: Exit 267
Site ID: 000000010619
Loc: I-64 WB On from Settlers Landing
Direction: WEST

File: D1107006.prn
Info: Ft. Monroe
GPS: 37.02419 76.32928

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
	10		11		12		13		07		8		9					
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15	34	136	26	129	25	149	38	142	28	169	51	100	56	72	258	897	36	128
00:30	24	113	14	124	18	108	19	125	27	141	43	107	34	87	179	805	25	115
00:45	15	123	22	127	19	127	18	121	23	120	38	101	51	104	186	823	26	117
01:00	10	119	10	123	11	111	15	117	33	138	28	81	33	94	140	783	20	111
01:15	13	127	14	110	10	134	10	120	25	146	33	117	31	97	136	851	19	121
01:30	6	111	15	97	23	136	7	103	17	137	24	102	31	112	123	798	17	114
01:45	7	111	16	136	11	118	17	137	14	127	22	127	47	87	134	843	19	120
02:00	9	123	23	122	11	115	6	123	14	146	25	100	35	111	123	840	17	120
02:15	8	154	12	134	5	133	10	126	13	147	30	118	32	109	110	921	15	131
02:30	11	153	12	122	3	132	11	127	15	163	30	96	24	104	106	897	15	128
02:45	12	132	12	146	5	130	9	130	12	195	20	111	29	99	99	943	14	134
03:00	6	149	9	155	7	155	8	147	14	169	23	95	22	120	89	990	12	141
03:15	8	184	13	159	9	181	10	175	11	216	16	101	24	109	91	1125	13	160
03:30	10	158	7	136	10	150	16	159	12	165	25	87	18	109	98	964	14	137
03:45	7	173	8	148	12	161	10	172	12	206	22	92	16	116	87	1068	12	152
04:00	5	158	16	148	9	151	19	137	15	179	18	106	13	112	95	991	13	141
04:15	10	211	20	146	12	191	11	182	7	256	14	121	11	100	85	1207	12	172
04:30	12	178	28	165	24	167	16	150	24	238	26	104	13	110	143	1112	20	158
04:45	31	191	36	153	42	239	33	193	36	235	27	127	18	113	223	1251	31	178
05:00	41	188	27	171	25	209	34	208	27	224	26	149	12	91	192	1240	27	177
05:15	49	230	61	215	57	256	60	248	47	258	30	138	16	115	320	1460	45	208
05:30	80	204	64	212	75	229	72	196	73	239	33	147	25	90	422	1317	60	188
05:45	102	162	92	170	101	189	110	172	115	185	57	156	35	84	612	1118	87	159
06:00	104	149	77	153	93	177	85	145	89	166	26	140	18	99	492	1029	70	147
06:15	115	145	86	141	110	118	113	139	109	147	37	127	17	96	587	913	83	130
06:30	128	117	106	127	132	125	128	138	131	177	42	130	28	81	695	895	99	127
06:45	197	111	173	107	185	138	191	135	186	108	58	123	26	82	1016	804	145	114
07:00	141	128	123	106	167	110	159	124	152	115	54	106	31	67	827	756	118	108
07:15	176	117	138	108	174	119	202	108	179	107	48	77	29	72	946	708	135	101
07:30	265	111	174	86	220	80	205	99	202	98	51	84	29	95	1146	653	163	93
07:45	288	73	197	83	231	84	244	110	233	110	73	84	46	75	1312	619	187	88
08:00	225	63	198	93	226	73	245	86	218	81	74	83	35	67	1221	546	174	78
08:15	178	72	153	89	170	87	163	99	164	74	61	57	50	78	939	556	134	79
08:30	132	68	132	86	153	85	146	106	113	83	70	71	60	59	806	558	115	79
08:45	121	79	118	77	119	81	137	72	130	78	89	80	58	54	772	521	110	74
09:00	106	62	99	80	97	69	105	94	115	71	85	76	51	63	658	515	94	73
09:15	88	70	99	79	98	104	107	84	97	67	96	78	77	48	662	530	94	75
09:30	97	78	104	69	135	88	98	89	104	96	90	91	83	57	711	568	101	81
09:45	102	72	96	64	100	70	122	70	133	71	101	65	75	38	729	450	104	64
10:00	109	59	85	58	90	49	99	63	105	55	101	63	92	49	681	396	97	56
10:15	78	61	83	65	111	63	101	68	101	68	74	71	88	58	636	454	90	64
10:30	106	56	75	59	108	50	100	61	110	75	89	67	75	53	663	421	94	60
10:45	103	44	118	47	97	59	96	57	83	98	87	76	101	48	685	429	97	61
11:00	99	45	108	40	96	33	91	48	113	69	100	51	123	46	730	332	104	47
11:15	111	31	97	41	102	37	113	29	128	84	101	49	103	37	755	308	107	44
11:30	97	34	91	48	118	33	94	37	123	53	92	61	86	29	701	295	100	42
11:45	114	32	104	37	124	44	131	37	104	69	112	49	79	26	768	294	109	42
12:00	110	30	103	33	131	32	120	37	155	54	110	51	83	25	812	262	116	37
TOTALS	9395		8818		9590		9599		10464		7175		6016		61057		8683	
AM Times	7:30		7:30		7:15		7:15		7:15		11:15		10:45		7:15		7:15	
AM Peaks	956		722		851		896		832		415		413		4625		659	
PM Times	16:45		17:00		16:45		16:45		16:45		17:00		15:00		16:45		16:45	
PM Peaks	813		768		933		845		956		590		454		5268		751	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:11/7/2008

Site Ref: Exit 267
Site ID: 000000010642
Loc: I-64 EB Off to Settlers Landing
Direction: EAST

File: D1107007.prn
Info: Ft. Monroe
GPS: 37.02487 76.33105

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
	10		11		12		13		07		8		9					
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15	12	57	26	96	36	106	39	91	36	114	49	102	44	40	242	606	34	86
00:30	12	47	40	121	30	103	36	122	26	101	39	135	44	38	227	667	32	95
00:45	3	63	33	89	23	94	24	114	23	132	27	88	31	39	164	619	23	88
01:00	8	62	27	121	20	120	22	110	28	134	35	103	38	47	178	697	25	99
01:15	7	47	20	107	22	111	26	120	19	92	33	75	37	48	164	600	23	85
01:30	5	50	8	109	16	127	12	121	22	115	24	87	38	40	125	649	17	92
01:45	4	39	11	99	11	107	13	119	21	107	17	102	21	42	98	615	14	87
02:00	4	58	17	111	16	104	8	119	13	130	21	119	25	72	104	713	14	101
02:15	6	31	9	107	11	113	19	119	9	132	20	90	20	33	94	625	13	89
02:30	4	36	13	121	8	104	12	98	12	141	20	109	20	38	89	647	12	92
02:45	7	71	8	105	11	122	9	147	9	131	23	100	18	38	85	714	12	102
03:00	0	59	14	130	8	140	7	111	9	167	26	124	22	65	86	796	12	113
03:15	6	106	5	139	6	129	8	124	8	145	10	92	20	66	63	801	9	114
03:30	0	126	6	149	11	151	11	121	9	164	14	112	10	55	61	878	8	125
03:45	6	156	16	154	4	153	8	113	7	221	16	104	8	31	65	932	9	133
04:00	3	149	11	156	1	163	4	148	10	191	13	82	6	73	48	962	6	137
04:15	1	119	3	114	5	128	2	125	3	188	16	107	8	74	38	855	5	122
04:30	2	142	7	131	5	160	10	127	5	126	8	110	10	73	47	869	6	124
04:45	4	152	9	132	12	117	8	120	10	102	8	92	4	82	55	797	7	113
05:00	2	131	15	162	5	169	9	140	11	111	7	109	6	84	55	906	7	129
05:15	3	146	10	146	7	166	10	155	13	125	5	107	7	59	55	904	7	129
05:30	7	173	10	152	19	157	19	144	17	181	9	74	4	73	85	954	12	136
05:45	6	117	14	124	20	140	25	156	25	178	14	91	5	72	109	878	15	125
06:00	13	139	27	137	30	161	46	153	29	195	8	84	10	58	163	927	23	132
06:15	17	138	35	133	39	169	39	140	39	175	19	79	14	77	202	911	28	130
06:30	21	117	29	152	62	154	56	149	41	192	14	74	9	67	232	905	33	129
06:45	34	119	52	109	123	133	98	114	55	151	24	100	9	60	395	786	56	112
07:00	74	116	39	99	193	119	139	118	102	150	33	76	19	75	599	753	85	107
07:15	82	98	57	121	241	110	227	84	106	81	34	88	14	47	761	629	108	89
07:30	138	81	90	100	201	88	226	97	162	82	44	82	18	53	879	583	125	83
07:45	114	90	113	77	231	68	223	82	181	97	29	89	22	57	913	560	130	80
08:00	119	76	152	88	234	84	227	102	212	86	41	78	22	66	1007	580	143	82
08:15	128	75	104	82	179	88	168	85	125	64	38	61	17	51	759	506	108	72
08:30	113	88	105	81	187	88	165	75	127	107	45	95	23	41	765	575	109	82
08:45	121	55	120	79	196	76	158	71	143	62	57	74	30	53	825	470	117	67
09:00	97	82	150	80	188	84	167	87	182	90	50	64	39	41	873	528	124	75
09:15	48	80	135	58	138	73	159	85	153	68	57	75	53	36	743	475	106	67
09:30	70	79	143	92	130	63	152	74	103	87	64	95	48	47	710	537	101	76
09:45	61	82	117	94	222	67	114	65	122	84	59	64	34	35	729	491	104	70
10:00	79	61	110	65	214	48	107	68	136	95	78	91	46	25	770	453	110	64
10:15	37	56	105	63	113	64	119	72	112	87	59	69	33	43	578	454	82	64
10:30	49	70	96	52	188	50	96	56	88	67	75	76	51	38	643	409	91	58
10:45	65	47	130	60	98	47	110	50	122	56	80	65	49	24	654	349	93	49
11:00	53	39	121	31	109	44	129	45	135	58	114	53	66	15	727	285	103	40
11:15	42	53	96	50	110	43	112	48	95	66	70	70	38	21	563	351	80	50
11:30	34	49	90	50	118	51	100	52	81	57	73	76	45	21	541	356	77	50
11:45	35	42	91	33	102	36	97	47	82	57	113	51	43	26	563	292	80	41
12:00	50	31	103	29	129	37	93	46	99	40	86	60	46	23	606	266	86	38
TOTALS	5906		7632		9111		8597		8759		6021		3626		49652		7047	
AM Times	7:30		8:45		7:15		7:15		7:30		11:00		10:30		7:15		7:15	
AM Peaks	499		548		907		903		680		370		204		3560		506	
PM Times	16:45		15:15		17:00		17:15		15:30		15:00		16:15		17:30		17:30	
PM Peaks	602		598		632		608		764		432		313		3670		523	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:11/6/2008

Site Ref: 000000010754
Site ID: 000000010754
Loc: I-64 WB On from Mallory
Direction: WEST

File: D1106011.prn
Info:
GPS:

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
	10		11		12		06		7		8		9					
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15	35	108	29	76	35	107		116	36	124	35	89	32	83	202	703	33	100
00:30	20	95	25	92	15	90		86	24	101	36	88	28	89	148	641	24	91
00:45	18	95	12	93	20	102		115	22	98	25	73	18	91	115	667	19	95
01:00	12	88	17	70	9	74		82	14	94	23	71	34	83	109	562	18	80
01:15	8	86	16	72	7	99		79	18	85	24	68	24	68	97	557	16	79
01:30	7	88	12	73	9	90		74	17	88	15	65	23	60	83	538	13	76
01:45	14	72	10	73	6	78		80	8	86	27	72	18	49	83	510	13	72
02:00	5	71	7	85	12	77		73	12	109	12	63	15	83	63	561	10	80
02:15	8	101	8	64	8	76		95	10	95	9	57	14	74	57	562	9	80
02:30	3	105	5	76	8	88		80	5	105	18	62	14	62	53	578	8	82
02:45	3	117	4	81	1	113		94	11	108	9	55	12	63	40	631	6	90
03:00	7	115	8	82	7	96		105	8	110	14	71	17	88	61	667	10	95
03:15	5	143	3	95	5	124		123	9	148	14	62	12	54	48	749	8	107
03:30	8	123	6	78	7	135		132	9	127	6	63	9	74	45	732	7	104
03:45	6	181	6	94	6	149		135	11	161	9	68	7	75	45	863	7	123
04:00	5	116	3	67	9	144		122	7	136	7	62	6	78	37	725	6	103
04:15	5	185	5	111	8	249		207	4	166	7	74	7	96	36	1088	6	155
04:30	9	152	9	72	7	181		178	11	159	11	74	15	67	62	883	10	126
04:45	16	226	13	88	10	266		236	14	231	24	70	8	66	85	1183	14	169
05:00	15	133	15	81	16	246		237	17	196	13	79	8	49	84	1021	14	145
05:15	8	150	17	109	15	237		235	27	188	8	59	7	60	82	1038	13	148
05:30	34	157	40	66	40	222		226	31	162	25	58	18	64	188	955	31	136
05:45	49	106	43	60	53	183		159	41	140	24	63	17	41	227	752	37	107
06:00	33	89	34	48	44	146		105	34	112	9	59	16	43	170	602	28	86
06:15	52	79	46	47	54	108		99	62	86	19	62	14	52	247	533	41	76
06:30	72	50	57	59	64	98		78	69	95	31	50	12	35	305	465	50	66
06:45	70	63	52	49	69	83		79	84	78	30	61	17	34	322	447	53	63
07:00	78	47	65	37	66	77		63	76	77	32	63	18	45	335	409	55	58
07:15	82	27	72	37	79	63		66	70	72	41	52	7	40	351	357	58	51
07:30	62	44	90	34	110	62		55	91	66	40	42	29	33	422	336	70	48
07:45	100	43	111	28	135	46		66	90	59	39	39	19	34	494	315	82	45
08:00	144	35	106	56	131	46		61	99	44	54	41	34	32	568	315	94	45
08:15	128	43	91	41	125	41		59	89	53	59	42	30	49	522	328	87	46
08:30	102	46	63	35	101	41		63	105	27	47	41	39	28	457	281	76	40
08:45	80	33	46	49	97	42		34	89	39	52	42	38	35	402	274	67	39
09:00	71	36	67	40	74	47		38	85	29	57	32	45	44	399	266	66	38
09:15	88	29	61	42	78	69		35	107	45	50	31	40	23	424	274	70	39
09:30	75	27	69	27	109	42		47	87	43	51	41	52	36	443	263	73	37
09:45	87	28	82	25	73	39		31	68	45	51	41	39	28	400	237	66	33
10:00	88	24	70	29	89	36		32	91	42	73	31	38	27	449	221	74	31
10:15	68	32	69	30	107	38		41	77	27	58	44	58	30	437	242	72	34
10:30	75	29	71	29	73	33		24	82	29	65	30	49	29	415	203	69	29
10:45	84	23	57	27	76	27		21	91	51	68	36	83	27	459	212	76	30
11:00	76	25	61	25	102	18		21	88	37	81	28	59	23	467	177	77	25
11:15	75	22	60	20	99	24		26	79	34	59	26	64	20	436	172	72	24
11:30	87	15	61	18	102	20	17	23	89	38	74	36	58	14	488	164	69	23
11:45	101	14	61	16	117	24	112	21	113	32	75	23	61	21	640	151	91	21
12:00	110	17	64	22	95	25	95	21	129	35	73	25	56	16	622	161	88	23
TOTALS	6121		4727		7103		4502		6822		4267		3753		37295		5549	
AM Times	7:45		7:30		7:30		11:15		11:15		11:00		10:45		11:15		7:45	
AM Peaks	474		398		501		224		410		289		264		2186		339	
PM Times	16:15		16:15		16:45		16:45		16:45		12:15		12:15		16:45		16:45	
PM Peaks	696		352		971		934		777		321		346		4197		598	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:11/13/2008

Site Ref: 000000010754
Site ID: 000000010754
Loc: I-64 WB On from Mallory
Direction: WEST

File: D1106011.prn
Info:
GPS:

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
							13		14		15		16					
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15							25	99	29	111	33	62	39	90	126	362	31	90
00:30							23	116	15	97	25	71	21	91	84	375	21	93
00:45							12	81	19	100	18	66	20	72	69	319	17	79
01:00							16	81	15	97	20	61	22	80	73	319	18	79
01:15							15	76	11	85	17	67	12	68	55	296	13	74
01:30							14	79	9	94	24	58	21	59	68	290	17	72
01:45							13	75	8	96	20	60	18	77	59	308	14	77
02:00							9	90	9	82	16	72	16	73	50	317	12	79
02:15							5	105	6	123	17	73	24	76	52	377	13	94
02:30							9	78	12	106	16	46	16	63	53	293	13	73
02:45							14	95	17	115	24	67	13	75	68	352	17	88
03:00							8	97	6	116	19	70	16	60	49	343	12	85
03:15							5	115	3	133	3	61	23		34	309	8	103
03:30							4	108	2	130	7	75	19		32	313	8	104
03:45							5	148	3	163	9	65	20		37	376	9	125
04:00							7	161	7	154	13	70	15		42	385	10	128
04:15							5	229	8	208	9	77	18		40	514	10	171
04:30							6	163	11	206	14	75	11		42	444	10	148
04:45							16	241	14	251	20	73	16		66	565	16	188
05:00							14	214	15	159	13	45	12		54	418	13	139
05:15							11	227	23	172	14	76	5		53	475	13	158
05:30							36	181	40	139	21	66	15		112	386	28	128
05:45							56	150	38	121	25	56	23		142	327	35	109
06:00							35	118	44	97	18	60	8		105	275	26	91
06:15							59	103	66	92	26	55	15		166	250	41	83
06:30							61	81	55	92	20	72	15		151	245	37	81
06:45							92	64	70	70	22	69	26		210	203	52	67
07:00							68	72	71	91	33	45	21		193	208	48	69
07:15							87	74	88	73	34	49	13		222	196	55	65
07:30							99	60	61	72	27	36	19		206	168	51	56
07:45							139	70	67	57	52	38	28		286	165	71	55
08:00							132	53	93	40	40	34	22		287	127	71	42
08:15							110	60	62	50	49	38	32		253	148	63	49
08:30							98	50	102	37	54	54	38		292	141	73	47
08:45							89	43	48	36	52	35	47		236	114	59	38
09:00							88	42	88	40	61	51	29		266	133	66	44
09:15							75	31	64	23	55	55	31		225	109	56	36
09:30							74	46	79	36	49	42	59		261	124	65	41
09:45							89	80	65	41	63	34	30		247	155	61	51
10:00							61	39	89	41	64	44	40		254	124	63	41
10:15							79	45	79	37	52	48	55		265	130	66	43
10:30							70	25	87	35	57	39	45		259	99	64	33
10:45							89	34	71	33	62	42	68		290	109	72	36
11:00							79	25	60	37	53	42	51		243	104	60	34
11:15							71	28	66	33	70	28	63		270	89	67	29
11:30							107	21	89	33	65	41	71		332	95	83	31
11:45							99	15	114	27	74	35	70		357	77	89	25
12:00							115	27	99	30	80	31	61		355	88	88	29
TOTALS	0		0		0		6808		6508		4258		2256		19830		5605	
AM Times							7:30		11:15		11:15		11:15		11:15		11:15	
AM Peaks							480		368		289		265		1314		327	
PM Times							16:45		16:15		16:00		12:15		16:15		16:15	
PM Peaks							863		824		295		333		1941		646	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:10/27/2008

Site Ref: 000000003604
Site ID: 000000003604
Loc: I-64 WB Off to Franklin/Mallory
Direction: WEST

File: D1027001.prn
Info: Ft. Monroe
GPS: 37.01687 76.32748

TIME	MON 27		TUE 28		WED 29		THU 30		FRI		SAT		SUN		WK TOT		WK AVG	
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15			3	42	5	33	8	37							16	112	5	37
00:30			6	49	13	28	6	39							25	116	8	38
00:45		44	8	43	4	62	5	34							17	183	5	45
01:00		35	6	39	4	43	7	40							17	157	5	39
01:15		40	4	31	6	34	8	36							18	141	6	35
01:30		60	1	39	3	43	5								9	142	3	47
01:45		38	4	39	0	54	6								10	131	3	43
02:00		32	2	51	1	46	3								6	129	2	43
02:15		51	3	37	3	30	2								8	118	2	39
02:30		35	0	45	4	49	5								9	129	3	43
02:45		41	2	38	1	55	6								9	134	3	44
03:00		40	4	53	3	45	9								16	138	5	46
03:15		38	1	43	0	34	16								17	115	5	38
03:30		32	1	46	0	40	12								13	118	4	39
03:45		46	2	46	0	52	2								4	144	1	48
04:00		37	2	44	0	67	4								6	148	2	49
04:15		37	1	42	2	40	2								5	119	1	39
04:30		45	3	49	1	49	0								4	143	1	47
04:45		41	3	47	7	54	5								15	142	5	47
05:00		44	7	48	8	39	7								22	131	7	43
05:15		40	6	38	3	24	8								17	102	5	34
05:30		32	11	39	17	37	12								40	108	13	36
05:45		50	16	42	19	39	16								51	131	17	43
06:00		40	26	30	32	33	20								78	103	26	34
06:15		40	38	43	33	27	39								110	110	36	36
06:30		29	49	31	41	39	37								127	99	42	33
06:45		32	54	24	65	28	37								156	84	52	28
07:00		22	59	27	80	31	44								183	80	61	26
07:15		21	71	23	87	30	102								260	74	86	24
07:30		24	85	27	87	35	116								288	86	96	28
07:45		19	102	25	111	19	110								323	63	107	21
08:00		15	88	20	96	16	89								273	51	91	17
08:15		10	69	17	75	17	81								225	44	75	14
08:30		11	76	12	66	15	75								217	38	72	12
08:45		24	67	17	80	17	67								214	58	71	19
09:00		10	56	20	57	13	51								164	43	54	14
09:15		9	33	18	45	19	52								130	46	43	15
09:30		15	51	18	44	19	46								141	52	47	17
09:45		14	63	22	51	20	55								169	56	56	18
10:00		12	57	21	47	10	31								135	43	45	14
10:15		18	44	18	34	23	44								122	59	40	19
10:30		13	39	19	34	11	51								124	43	41	14
10:45		12	34	7	37	15	44								115	34	38	11
11:00		7	35	27	25	5	44								104	39	34	13
11:15		12	29	19	39	9	53								121	40	40	13
11:30		9	40	21	45	8	34								119	38	39	12
11:45		10	27	16	34	8	32								93	34	31	11
12:00		12	42	12	37	19	45								124	43	41	14
TOTALS	1298		2954		2969		1739		0		0		0		8960		2914	
AM Times			7:15		7:15		7:15								7:15		7:15	
AM Peaks			346		381		417								1144		380	
PM Times	13:30		15:00		16:00		12:15								12:45		15:45	
PM Peaks	181		188		210		150								623		183	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:10/27/2008

Site Ref: 000000003566
Site ID: 000000003566
Loc: I-64 WB Off to Settlers Landing/Woodland
Direction: WEST

File: D1027004.prn
Info: Ft. Monroe
GPS: 37.02209 76.32844

TIME	MON 27		TUE 28		WED 29		THU 30		FRI		SAT		SUN		WK TOT		WK AVG	
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15			24	94	28	76	31	78							83	248	27	82
00:30			17	76	28	54	36	83							81	213	27	71
00:45			23	68	26	84	18	75							67	227	22	75
01:00			10	68	15	78	23	83							48	229	16	76
01:15		0	10	51	9	47	30	74							49	172	16	43
01:30		78	14	56	16	58	27	28							57	220	19	55
01:45		64	5	58	8	74	20								33	196	11	65
02:00		81	7	84	10	83	20								37	248	12	82
02:15		72	6	76	13	76	19								38	224	12	74
02:30		86	9	94	10	84	29								48	264	16	88
02:45		96	5	89	6	83	14								25	268	8	89
03:00		84	6	96	3	108	30								39	288	13	96
03:15		91	1	92	0	110	47								48	293	16	97
03:30		134	1	107	6	108	27								34	349	11	116
03:45		130	1	112	5	133	17								23	375	7	125
04:00		112	2	127	6	129	8								16	368	5	122
04:15		132	8	129	3	111	9								20	372	6	124
04:30		146	4	155	9	154	3								16	455	5	151
04:45		135	4	124	3	150	4								11	409	3	136
05:00		158	2	139	5	139	5								12	436	4	145
05:15		137	8	143	9	140	9								26	420	8	140
05:30		143	5	140	13	132	9								27	415	9	138
05:45		137	15	139	18	159	15								48	435	16	145
06:00		101	25	114	20	122	16								61	337	20	112
06:15		122	28	102	35	108	33								96	332	32	110
06:30		91	42	102	38	105	31								111	298	37	99
06:45		107	47	98	39	101	30								116	306	38	102
07:00		79	54	90	53	102	30								137	271	45	90
07:15		63	60	76	56	86	75								191	225	63	75
07:30		67	53	90	69	74	79								201	231	67	77
07:45		64	78	70	66	47	81								225	181	75	60
08:00		43	81	68	72	55	87								240	166	80	55
08:15		46	71	54	87	61	77								235	161	78	53
08:30		38	40	59	64	57	72								176	154	58	51
08:45		53	73	68	72	67	77								222	188	74	62
09:00		54	81	49	80	73	89								250	176	83	58
09:15		46	48	54	62	52	66								176	152	58	50
09:30		33	63	58	55	60	67								185	151	61	50
09:45		59	89	66	63	59	42								194	184	64	61
10:00		51	49	44	59	48	60								168	143	56	47
10:15		48	42	46	63	49	62								167	143	55	47
10:30		45	52	47	53	53	56								161	145	53	48
10:45		41	54	48	63	56	40								157	145	52	48
11:00		26	47	55	46	30	63								156	111	52	37
11:15		26	55	61	52	30	70								177	117	59	39
11:30		16	55	50	65	25	70								190	91	63	30
11:45		27	60	40	63	26	57								180	93	60	31
12:00		23	80	43	72	35	74								226	101	75	33
TOTALS		3385		5583		5667		2375		0		0		0		17010		5607
AM Times				7:30		8:15		7:30								7:30		7:30
AM Peaks				283		303		324								901		300
PM Times		16:30		16:30		16:30		12:15								16:30		16:30
PM Peaks		576		561		583		319								1720		572

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:10/27/2008

Site Ref: 000000009360
Site ID: 000000009360
Loc: I-64 WB On from Settlers Landing/Woodlan
Direction: WEST

File: D1027005.prn
Info: Ft. Monroe
GPS: 37.02528 76.33065

TIME	MON 27		TUE 28		WED 29		THU 30		FRI		SAT		SUN		WK TOT		WK AVG	
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15			16	110	26	134	26	124							68	368	22	122
00:30			14	100	23	133	17	137							54	370	18	123
00:45			7	145	15	119	24	118							46	382	15	127
01:00			8	117	11	98	8	105							27	320	9	106
01:15			7	111	10	134	11	108							28	353	9	117
01:30		35	5	101	9	115	10	99							24	350	8	87
01:45		123	12	128	4	143	10								26	394	8	131
02:00		107	3	119	5	117	25								33	343	11	114
02:15		129	3	116	8	131	8								19	376	6	125
02:30		119	5	141	7	130	11								23	390	7	130
02:45		130	3	136	5	125	9								17	391	5	130
03:00		164	6	138	5	163	9								20	465	6	155
03:15		159	6	170	9	150	15								30	479	10	159
03:30		132	2	139	4	146	16								22	417	7	139
03:45		139	9	157	12	157	10								31	453	10	151
04:00		130	3	146	5	134	9								17	410	5	136
04:15		198	6	166	11	180	9								26	544	8	181
04:30		174	15	201	13	181	18								46	556	15	185
04:45		224	24	239	15	230	18								57	693	19	231
05:00		193	30	196	39	197	33								102	586	34	195
05:15		227	45	258	40	241	48								133	726	44	242
05:30		228	75	254	69	199	69								213	681	71	227
05:45		161	90	186	110	163	90								290	510	96	170
06:00		155	90	161	82	123	88								260	439	86	146
06:15		136	126	148	95	168	90								311	452	103	150
06:30		114	115	110	127	149	127								369	373	123	124
06:45		130	186	122	167	145	184								537	397	179	132
07:00		94	136	133	169	126	147								452	353	150	117
07:15		90	159	94	154	105	160								473	289	157	96
07:30		82	200	90	206	123	211								617	295	205	98
07:45		67	246	92	234	103	222								702	262	234	87
08:00		57	239	81	239	62	241								719	200	239	66
08:15		73	153	109	165	83	164								482	265	160	88
08:30		55	135	75	142	82	144								421	212	140	70
08:45		44	141	74	140	82	133								414	200	138	66
09:00		65	149	60	114	86	112								375	211	125	70
09:15		52	193	79	83	97	103								379	228	126	76
09:30		51	131	89	112	159	110								353	299	117	99
09:45		60	110	85	104	92	107								321	237	107	79
10:00		72	94	73	85	64	100								279	209	93	69
10:15		62	79	58	88	49	86								253	169	84	56
10:30		54	100	55	89	61	97								286	170	95	56
10:45		38	100	54	106	50	87								293	142	97	47
11:00		37	88	32	91	27	90								269	96	89	32
11:15		40	102	54	116	39	106								324	133	108	44
11:30		28	74	36	115	24	94								283	88	94	29
11:45		30	101	33	104	27	130								335	90	111	30
12:00		31	85	31	106	15	111								302	77	100	25
TOTALS		4489		9328		9349		4438		0		0		0		27604		9138
AM Times				7:15		7:30		7:30								7:30		7:30
AM Peaks				844		844		838								2520		838
PM Times		16:45		16:45		16:45		12:15								16:45		16:45
PM Peaks		872		947		867		484								2686		895

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:10/27/2008

Site Ref: 000000009390
Site ID: 000000009390
Loc: I-64 EB Off to Settlers Landing/Woodland
Direction: EAST

File: D1027006.prn
Info: Ft. Monroe
GPS: 37.02496 76.33086

TIME	MON 27		TUE 28		WED 29		THU 30		FRI		SAT		SUN		WK TOT		WK AVG	
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15			31	104	44	114	33	116							108	334	36	111
00:30			41	128	31	99	24	122							96	349	32	116
00:45			20	108	24	131	15	105							59	344	19	114
01:00			15	126	23	106	18								56	232	18	116
01:15			17	106	19	115	16								52	221	17	110
01:30			16	130	17	105	17								50	235	16	117
01:45			12	108	11	132	15								38	240	12	120
02:00			8	117	4	127	9								21	244	7	122
02:15			6	107	10	105	8								24	212	8	106
02:30			10	127	9	135	15								34	262	11	131
02:45			10	136	10	109	9								29	245	9	122
03:00			8	140	10	155	9								27	295	9	147
03:15			2	108	7	130	8								17	238	5	119
03:30			2	161	4	132	13								19	293	6	146
03:45			4	165	3	168	14								21	333	7	166
04:00			6	214	4	165	8								18	379	6	189
04:15			0	186	5	148	7								12	334	4	167
04:30			1	174	2	135	9								12	309	4	154
04:45			10	151	8	140	4								22	291	7	145
05:00			7	144	8	170	3								18	314	6	157
05:15			2	148	4	143	11								17	291	5	145
05:30			19	161	15	198	8								42	359	14	179
05:45			16	145	25	158	16								57	303	19	151
06:00			24	137	28	128	20								72	265	24	132
06:15			47	140	40	136	37								124	276	41	138
06:30			70	133	54	131	46								170	264	56	132
06:45	68	179	126	71	145	68									318	339	106	113
07:00	100	232	120	127	136	112									471	356	157	118
07:15	90	202	115	159	143	133									494	348	164	116
07:30	96	210	101	226	119	218									654	316	218	105
07:45	66	189	86	226	94	220									635	246	211	82
08:00	82	214	91	188	93	212									614	266	204	88
08:15	56	213	92	170	89	164									547	237	182	79
08:30	74	205	110	143	112	119									467	296	155	98
08:45	53	216	83	177	84	154									547	220	182	73
09:00	62	195	81	188	104	155									538	247	179	82
09:15	63	47	81	137	104	155									339	248	113	82
09:30	64	163	93	119	90	174									456	247	152	82
09:45	67	97	65	133	78	107									337	210	112	70
10:00	57	142	61	149	65	110									401	183	133	61
10:15	54	120	54	97	45	113									330	153	110	51
10:30	42	84	51	96	68	91									271	161	90	53
10:45	51	116	52	125	51	138									379	154	126	51
11:00	35	138	43	109	40	139									386	118	128	39
11:15	43	108	48	103	53	102									313	144	104	48
11:30	51	86	41	86	52	102									274	144	91	48
11:45	30	104	27	124	43	86									314	100	104	33
12:00	36	92	32	95	29	92									279	97	93	32
TOTALS	1340		9013		8819		3699		0		0		0		22871		8668	
AM Times			8:00		7:30		7:30								7:30		7:30	
AM Peaks			848		810		814								2450		815	
PM Times	18:45		15:45		17:00		12:15								18:45		15:45	
PM Peaks	354		739		669		343								1359		676	

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:10/27/2008

Site Ref: 000000009366
Site ID: 000000009366
Loc: I-64 EB On from Settlers Landing/Woodlan
Direction: EAST

File: D1027007.prn
Info: Ft. Monroe
GPS: 37.02265 76.32919

TIME	MON 27		TUE 28		WED 29		THU 30		FRI		SAT		SUN		WK TOT		WK AVG	
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15			21	55	21	68	21	72							63	195	21	65
00:30			12	72	22	78	22	81							56	231	18	77
00:45			13	60	15	70	16	81							44	211	14	70
01:00			5	68	7	68	11	45							23	181	7	60
01:15			4	62	4	79	7								15	141	5	70
01:30			7	81	7	59	14								28	140	9	70
01:45			4	81	8	69	12								24	150	8	75
02:00			6	54	7	61	16								29	115	9	57
02:15			8	75	5	74	6								19	149	6	74
02:30			7	82	7	81	19								33	163	11	81
02:45			6	73	4	68	7								17	141	5	70
03:00			7	73	3	69	8								18	142	6	71
03:15			4	88	7	94	10								21	182	7	91
03:30			6	100	4	106	11								21	206	7	103
03:45			5	120	5	112	4								14	232	4	116
04:00			7	135	8	97	18								33	232	11	116
04:15			7	115	11	112	11								29	227	9	113
04:30			8	126	11	134	15								34	260	11	130
04:45			16	109	21	94	14								51	203	17	101
05:00			28	114	36	113	28								92	227	30	113
05:15			41	134	45	134	39								125	268	41	134
05:30			52	111	54	107	53								159	218	53	109
05:45			91	105	98	105	89								278	210	92	105
06:00			125	84	115	82	128								368	166	122	83
06:15			154	100	128	88	114								396	188	132	94
06:30			149	90	160	85	163								472	175	157	87
06:45			182	71	161	77	149								492	148	164	74
07:00		40	163	56	171	60	165								499	156	166	52
07:15		42	170	45	176	63	167								513	150	171	50
07:30		44	220	60	177	62	195								592	166	197	55
07:45		38	231	39	206	55	201								638	132	212	44
08:00		37	197	36	168	48	167								532	121	177	40
08:15		27	163	35	153	53	177								493	115	164	38
08:30		35	143	37	157	45	138								438	117	146	39
08:45		31	69	38	119	68	95								283	137	94	45
09:00		38	4	35	92	61	102								198	134	66	44
09:15		36	35	33	76	64	79								190	133	63	44
09:30		28	222	41	84	92	95								401	161	133	53
09:45		41	128	48	77	54	83								288	143	96	47
10:00		28	135	40	82	44	74								291	112	97	37
10:15		37	83	32	64	28	55								202	97	67	32
10:30		29	76	34	55	42	87								218	105	72	35
10:45		21	84	27	74	30	68								226	78	75	26
11:00		22	68	18	73	26	74								215	66	71	22
11:15		14	56	10	68	21	62								186	45	62	15
11:30		18	64	21	62	24	68								194	63	64	21
11:45		19	69	20	59	30	57								185	69	61	23
12:00		22	72	25	68	18	74								214	65	71	21
TOTALS		647		6595		6607		3567		0		0		0		17416		6493
AM Times				7:15		7:00		7:30								7:15		7:15
AM Peaks				818		730		740								2275		757
PM Times		19:00		15:45		16:30		12:15								16:30		16:30
PM Peaks		164		496		475		279								958		478

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:10/27/2008

Site Ref: 000000010759
Site ID: 000000010759
Loc: I-64 EB Off to Franklin/Mallory
Direction: EAST

File: D1027008.prn
Info: Ft. Monroe
GPS: 37.01738 76.32811

TIME	MON 27		TUE 28		WED 29		THU 30		FRI		SAT		SUN		WK TOT		WK AVG	
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15			24	80	28	72	21	71							73	223	24	74
00:30			18	85	22	85	17	91							57	261	19	87
00:45			9	76	17	82	16	79							42	237	14	79
01:00			5	68	9	98	11	52							25	218	8	72
01:15			8	69	10	92	13								31	161	10	80
01:30			11	66	7	74	12								30	140	10	70
01:45			8	54	7	63	8								23	117	7	58
02:00			4	60	8	59	13								25	119	8	59
02:15			10	56	10	63	7								27	119	9	59
02:30			9	49	5	66	18								32	115	10	57
02:45			3	67	4	76	8								15	143	5	71
03:00			5	78	4	62	2								11	140	3	70
03:15			6	68	6	71	9								21	139	7	69
03:30			1	74	3	80	4								8	154	2	77
03:45			2	52	7	65	5								14	117	4	58
04:00			6	34	8	62	10								24	96	8	48
04:15			13	37	8	65	7								28	102	9	51
04:30			3	45	2	69	2								7	114	2	57
04:45			5	55	5	51	5								15	106	5	53
05:00			14	53	15	79	11								40	132	13	66
05:15			10	72	8	73	16								34	145	11	72
05:30			29	72	25	77	15								69	149	23	74
05:45			33	63	38	62	36								107	125	35	62
06:00			65	47	61	79	79								205	126	68	63
06:15			55	66	68	59	55								178	125	59	62
06:30			46	59	100	77	68								214	136	71	68
06:45			36	39	80	61	83								199	100	66	50
07:00		0	44	39	137	51	130								311	90	103	30
07:15		36	39	31	102	57	132								273	124	91	41
07:30		36	48	54	85	42	93								226	132	75	44
07:45		29	58	58	83	36	72								213	123	71	41
08:00		27	77	37	151	43	121								349	107	116	35
08:15		30	108	43	120	48	127								355	121	118	40
08:30		28	82	35	126	49	86								294	112	98	37
08:45		30	12	44	96	39	112								220	113	73	37
09:00		28	9	26	91	41	85								185	95	61	31
09:15		25	32	28	89	37	77								198	90	66	30
09:30		28	17	34	82	33	91								190	95	63	31
09:45		30	40	31	74	28	68								182	89	60	29
10:00		23	48	30	76	24	83								207	77	69	25
10:15		36	66	36	70	29	58								194	101	64	33
10:30		19	50	24	52	29	67								169	72	56	24
10:45		18	75	22	53	24	54								182	64	60	21
11:00		19	63	25	67	8	65								195	52	65	17
11:15		18	58	16	57	20	60								175	54	58	18
11:30		16	53	23	48	21	65								166	60	55	20
11:45		31	62	26	57	25	61								180	82	60	27
12:00		16	72	23	65	18	66								203	57	67	19
TOTALS		523		3880		4970		2617		0		0		0		11990		4455
AM Times				7:45		8:00		8:00								8:00		8:00
AM Peaks				325		493		446								1218		405
PM Times		19:15		12:15		12:30		12:15								12:15		12:30
PM Peaks		128		309		357		293								939		318

Malone & Associates Inc.
WEEKLY SUMMARY
Starting:10/27/2008

Site Ref: 000000010642
Site ID: 000000010642
Loc: I-64 EB On from Franklin/Mallory
Direction: EAST

File: D1027009.prn
Info: Ft. Monroe
GPS: 37.01539 76.32739

TIME	MON 27		TUE 28		WED 29		THU 30		FRI		SAT		SUN		WK TOT		WK AVG	
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15			14	61	5	52	13	61							32	174	10	58
00:30			7	47	9	54	6	51							22	152	7	50
00:45			5	49	3	42	4	46							12	137	4	45
01:00			3	42	5	39	2	42							10	123	3	41
01:15			1	49	1	50	0								2	99	0	49
01:30			2	45	1	43	3								6	88	2	44
01:45			2	46	3	46	3								8	92	2	46
02:00			1	39	5	40	2								8	79	2	39
02:15			2	46	5	57	0								7	103	2	51
02:30			3	55	2	49	2								7	104	2	52
02:45			1	48	2	73	7								10	121	3	60
03:00			1	49	1	42	4								6	91	2	45
03:15			2	58	3	86	1								6	144	2	72
03:30			3	64	1	70	5								9	134	3	67
03:45			5	127	2	95	5								12	222	4	111
04:00			5	160	6	110	2								13	270	4	135
04:15			1	146	3	135	3								7	281	2	140
04:30			1	127	4	105	6								11	232	3	116
04:45			6	164	6	115	6								18	279	6	139
05:00			16	124	18	107	12								46	231	15	115
05:15			17	134	19	97	21								57	231	19	115
05:30			36	105	27	85	16								79	190	26	95
05:45			37	73	36	51	39								112	124	37	62
06:00			40	57	47	58	37								124	115	41	57
06:15			57	56	63	58	70								190	114	63	57
06:30			78	49	68	42	67								213	91	71	45
06:45			146	39	91	48	109								346	87	115	43
07:00			173	32	95	33	104								372	65	124	32
07:15			193	31	140	23	118								451	54	150	27
07:30		5	219	27	186	22	169								574	54	191	18
07:45		14	214	21	161	15	185								560	50	186	16
08:00		11	144	23	135	17	126								405	51	135	17
08:15		9	140	20	90	20	95								325	49	108	16
08:30		7	115	14	78	18	92								285	39	95	13
08:45		20	48	11	71	13	75								194	44	64	14
09:00		11	1	14	68	19	65								134	44	44	14
09:15		9	126	13	45	18	51								222	40	74	13
09:30		13	158	13	44	25	49								251	51	83	17
09:45		9	120	11	45	26	49								214	46	71	15
10:00		7	107	7	55	13	49								211	27	70	9
10:15		5	67	9	57	15	47								171	29	57	9
10:30		6	47	18	46	14	40								133	38	44	12
10:45		5	32	8	39	8	50								121	21	40	7
11:00		3	51	5	40	9	40								131	17	43	5
11:15		5	48	6	50	9	45								143	20	47	6
11:30		5	59	5	44	4	54								157	14	52	4
11:45		2	53	3	54	7	48								155	12	51	4
12:00		2	50	7	41	9	38								129	18	43	6
TOTALS		148		5014		4206		2234		0		0		0		11602		4445
AM Times				7:00		7:15		7:15								7:15		7:15
AM Peaks				799		622		598								1990		662
PM Times		20:45		16:00		16:00		12:15								16:00		16:00
PM Peaks		53		597		465		200								1062		530

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Mallory St & Atlantic Ave AM
Site Code : 00005818
Start Date : 10/30/2008
Page No : 1

Groups Printed- Vehicles

	Mallory St Southbound					Atlantic Blvd Westbound					Mallory St Northbound					Atlantic Blvd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	0	33	0	1	34	0	0	12	0	12	0	6	3	0	9	25	1	1	0	27	82
06:45 AM	0	42	0	0	42	0	1	6	1	8	0	15	1	0	16	13	0	2	0	15	81
Total	0	75	0	1	76	0	1	18	1	20	0	21	4	0	25	38	1	3	0	42	163
07:00 AM	0	45	0	1	46	2	3	12	1	18	0	9	3	3	15	19	3	0	1	23	102
07:15 AM	0	55	0	0	55	3	1	11	1	16	3	10	8	0	21	25	0	1	0	26	118
07:30 AM	0	54	0	0	54	1	4	16	1	22	2	14	6	0	22	28	1	2	0	31	129
07:45 AM	1	40	0	0	41	0	3	7	0	10	3	8	4	0	15	27	3	1	0	31	97
Total	1	194	0	1	196	6	11	46	3	66	8	41	21	3	73	99	7	4	1	111	446
08:00 AM	0	38	1	0	39	1	4	4	0	9	1	18	5	0	24	21	2	1	0	24	96
08:15 AM	2	27	0	1	30	2	1	8	0	11	1	14	6	0	21	11	2	2	1	16	78
Grand Total	3	334	1	3	341	9	17	76	4	106	10	94	36	3	143	169	12	10	2	193	783
Apprch %	0.9	97.9	0.3	0.9		8.5	16.0	71.7	3.8		7.0	65.7	25.2	2.1		87.6	6.2	5.2	1.0		
Total %	0.4	42.7	0.1	0.4	43.6	1.1	2.2	9.7	0.5	13.5	1.3	12.0	4.6	0.4	18.3	21.6	1.5	1.3	0.3	24.6	

	Mallory St Southbound					Atlantic Blvd Westbound					Mallory St Northbound					Atlantic Blvd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	1	194	0	1	196	6	11	46	3	66	8	41	21	3	73	99	7	4	1	111	446
Percent	0.5	99.0	0.0	0.5		9.1	16.7	69.7	4.5		11.0	56.2	28.8	4.1		89.2	6.3	3.6	0.9		
07:30 Volume	0	54	0	0	54	1	4	16	1	22	2	14	6	0	22	28	1	2	0	31	129
Peak Factor																					0.864
High Int.	07:15 AM					07:30 AM					07:30 AM					07:30 AM					
Volume	0	55	0	0	55	1	4	16	1	22	2	14	6	0	22	28	1	2	0	31	
Peak Factor					0.891					0.750					0.830					0.895	

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Mallory St & Atlantic Ave AM
Site Code : 00005818
Start Date : 10/30/2008
Page No : 1

Groups Printed- Trucks

	Mallory St Southbound					Atlantic Blvd Westbound					Mallory St Northbound					Atlantic Blvd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	1	0	0	0	1	5
Total	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	1	0	0	0	1	5
07:00 AM	0	3	0	0	3	0	0	0	0	0	1	1	0	0	2	1	0	0	0	1	6
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	2	0	3	1	0	0	0	1	5
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
07:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	1	0	0	0	1	4
Total	0	5	0	0	5	0	0	0	0	0	1	5	3	0	9	3	0	0	0	3	17
08:00 AM	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Grand Total	0	6	0	0	6	0	0	0	0	0	3	12	3	0	18	4	0	0	0	4	28
Apprch %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		16.7	66.7	16.7	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	21.4	0.0	0.0	21.4	0.0	0.0	0.0	0.0	0.0	10.7	42.9	10.7	0.0	64.3	14.3	0.0	0.0	0.0	14.3	

	Mallory St Southbound					Atlantic Blvd Westbound					Mallory St Northbound					Atlantic Blvd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	06:45 AM																				
Volume	0	4	0	0	4	0	0	0	0	0	2	7	2	0	11	3	0	0	0	3	18
Percent	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		18.2	63.6	18.2	0.0		100.0	0.0	0.0	0.0		
07:00 Volume	0	3	0	0	3	0	0	0	0	0	1	1	0	0	2	1	0	0	0	1	6
Peak Factor																					0.750
High Int.	07:00 AM					6:15:00 AM					06:45 AM					06:45 AM					
Volume	0	3	0	0	3	0	0	0	0	0	1	3	0	0	4	1	0	0	0	1	
Peak Factor					0.333										0.688					0.750	

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Mallory St & Atlantic Ave AM
Site Code : 00005818
Start Date : 10/30/2008
Page No : 1

Groups Printed- Vehicles - Trucks

	Mallory St Southbound					Atlantic Blvd Westbound					Mallory St Northbound					Atlantic Blvd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	0	33	0	1	34	0	0	12	0	12	0	6	3	0	9	25	1	1	0	27	82
06:45 AM	0	42	0	0	42	0	1	6	1	8	1	18	1	0	20	14	0	2	0	16	86
Total	0	75	0	1	76	0	1	18	1	20	1	24	4	0	29	39	1	3	0	43	168
07:00 AM	0	48	0	1	49	2	3	12	1	18	1	10	3	3	17	20	3	0	1	24	108
07:15 AM	0	56	0	0	56	3	1	11	1	16	3	11	10	0	24	26	0	1	0	27	123
07:30 AM	0	54	0	0	54	1	4	16	1	22	2	16	6	0	24	28	1	2	0	31	131
07:45 AM	1	41	0	0	42	0	3	7	0	10	3	9	5	0	17	28	3	1	0	32	101
Total	1	199	0	1	201	6	11	46	3	66	9	46	24	3	82	102	7	4	1	114	463
08:00 AM	0	39	1	0	40	1	4	4	0	9	2	20	5	0	27	21	2	1	0	24	100
08:15 AM	2	27	0	1	30	2	1	8	0	11	1	16	6	0	23	11	2	2	1	16	80
Grand Total	3	340	1	3	347	9	17	76	4	106	13	106	39	3	161	173	12	10	2	197	811
Apprch %	0.9	98.0	0.3	0.9		8.5	16.0	71.7	3.8		8.1	65.8	24.2	1.9		87.8	6.1	5.1	1.0		
Total %	0.4	41.9	0.1	0.4	42.8	1.1	2.1	9.4	0.5	13.1	1.6	13.1	4.8	0.4	19.9	21.3	1.5	1.2	0.2	24.3	

	Mallory St Southbound					Atlantic Blvd Westbound					Mallory St Northbound					Atlantic Blvd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	1	199	0	1	201	6	11	46	3	66	9	46	24	3	82	102	7	4	1	114	463
Percent	0.5	99.0	0.0	0.5		9.1	16.7	69.7	4.5		11.0	56.1	29.3	3.7		89.5	6.1	3.5	0.9		
07:30 Volume	0	54	0	0	54	1	4	16	1	22	2	16	6	0	24	28	1	2	0	31	131
Peak Factor																					0.884
High Int.	07:15 AM					07:30 AM					07:15 AM					07:45 AM					
Volume	0	56	0	0	56	1	4	16	1	22	3	11	10	0	24	28	3	1	0	32	
Peak Factor					0.897					0.750					0.854					0.891	

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Mallory St & Atlantic Ave PM
Site Code : 00005818
Start Date : 10/29/2008
Page No : 1

Groups Printed- Vehicles

	Mallory St Southbound					Atlantic Ave Westbound					Mallory St Northbound					Atlantic Ave Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	20	1	0	21	1	12	3	0	16	4	22	7	0	33	5	7	2	0	14	84
04:15 PM	0	17	1	0	18	0	2	6	0	8	6	21	7	0	34	4	4	2	0	10	70
04:30 PM	1	13	0	0	14	1	2	2	0	5	5	33	11	1	50	5	4	5	0	14	83
04:45 PM	0	9	0	0	9	0	0	3	0	3	9	27	8	0	44	3	1	1	0	5	61
Total	1	59	2	0	62	2	16	14	0	32	24	103	33	1	161	17	16	10	0	43	298
05:00 PM	1	14	0	0	15	1	0	1	1	3	7	46	5	0	58	3	5	3	0	11	87
05:15 PM	0	11	1	0	12	0	1	4	0	5	4	36	8	0	48	1	1	2	0	4	69
05:30 PM	0	15	1	0	16	0	3	4	0	7	5	33	9	0	47	3	5	1	0	9	79
05:45 PM	0	11	0	0	11	1	3	3	0	7	3	28	4	0	35	1	4	1	0	6	59
Total	1	51	2	0	54	2	7	12	1	22	19	143	26	0	188	8	15	7	0	30	294
Grand Total	2	110	4	0	116	4	23	26	1	54	43	246	59	1	349	25	31	17	0	73	592
Apprch %	1.7	94.8	3.4	0.0		7.4	42.6	48.1	1.9		12.3	70.5	16.9	0.3		34.2	42.5	23.3	0.0		
Total %	0.3	18.6	0.7	0.0	19.6	0.7	3.9	4.4	0.2	9.1	7.3	41.6	10.0	0.2	59.0	4.2	5.2	2.9	0.0	12.3	

	Mallory St Southbound					Atlantic Ave Westbound					Mallory St Northbound					Atlantic Ave Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	2	53	1	0	56	2	4	12	1	19	27	127	31	1	186	15	14	11	0	40	301
Percent	3.6	94.6	1.8	0.0		10.5	21.1	63.2	5.3		14.5	68.3	16.7	0.5		37.5	35.0	27.5	0.0		
05:00 Volume	1	14	0	0	15	1	0	1	1	3	7	46	5	0	58	3	5	3	0	11	87
Peak Factor																					0.865
High Int.	04:15 PM					04:15 PM					05:00 PM					04:30 PM					
Volume	0	17	1	0	18	0	2	6	0	8	7	46	5	0	58	5	4	5	0	14	
Peak Factor					0.778					0.594					0.802					0.714	

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Mallory St & Atlantic Ave PM
Site Code : 00005818
Start Date : 10/29/2008
Page No : 1

Groups Printed- Trucks

	Mallory St Southbound					Atlantic Ave Westbound					Mallory St Northbound					Atlantic Ave Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Grand Total	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	5
Apprch %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	40.0	20.0	0.0	0.0	0.0	20.0	

	Mallory St Southbound					Atlantic Ave Westbound					Mallory St Northbound					Atlantic Ave Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	3
Percent	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
04:45 Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Peak Factor																					0.750
High Int.	04:15 PM					3:45:00 PM					04:00 PM					04:45 PM					
Volume	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	
Peak Factor					0.250										0.250					0.250	

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Mallory St & Atlantic Ave PM
Site Code : 00005818
Start Date : 10/29/2008
Page No : 1

Groups Printed- Vehicles - Trucks

	Mallory St Southbound					Atlantic Ave Westbound					Mallory St Northbound					Atlantic Ave Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	20	1	0	21	1	12	3	0	16	4	23	7	0	34	5	7	2	0	14	85
04:15 PM	0	18	1	0	19	0	2	6	0	8	6	21	7	0	34	4	4	2	0	10	71
04:30 PM	1	13	0	0	14	1	2	2	0	5	5	33	11	1	50	5	4	5	0	14	83
04:45 PM	0	9	0	0	9	0	0	3	0	3	9	27	8	0	44	4	1	1	0	6	62
Total	1	60	2	0	63	2	16	14	0	32	24	104	33	1	162	18	16	10	0	44	301
05:00 PM	1	14	0	0	15	1	0	1	1	3	7	46	5	0	58	3	5	3	0	11	87
05:15 PM	0	11	1	0	12	0	1	4	0	5	4	37	8	0	49	1	1	2	0	4	70
05:30 PM	0	15	1	0	16	0	3	4	0	7	5	33	9	0	47	3	5	1	0	9	79
05:45 PM	0	12	0	0	12	1	3	3	0	7	3	28	4	0	35	1	4	1	0	6	60
Total	1	52	2	0	55	2	7	12	1	22	19	144	26	0	189	8	15	7	0	30	296
Grand Total	2	112	4	0	118	4	23	26	1	54	43	248	59	1	351	26	31	17	0	74	597
Apprch %	1.7	94.9	3.4	0.0		7.4	42.6	48.1	1.9		12.3	70.7	16.8	0.3		35.1	41.9	23.0	0.0		
Total %	0.3	18.8	0.7	0.0	19.8	0.7	3.9	4.4	0.2	9.0	7.2	41.5	9.9	0.2	58.8	4.4	5.2	2.8	0.0	12.4	

	Mallory St Southbound					Atlantic Ave Westbound					Mallory St Northbound					Atlantic Ave Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	2	54	1	0	57	2	4	12	1	19	27	127	31	1	186	16	14	11	0	41	303
Percent	3.5	94.7	1.8	0.0		10.5	21.1	63.2	5.3		14.5	68.3	16.7	0.5		39.0	34.1	26.8	0.0		
05:00 Volume	1	14	0	0	15	1	0	1	1	3	7	46	5	0	58	3	5	3	0	11	87
Peak Factor																					0.871
High Int.	04:15 PM					04:15 PM					05:00 PM					04:30 PM					
Volume	0	18	1	0	19	0	2	6	0	8	7	46	5	0	58	5	4	5	0	14	
Peak Factor					0.750					0.594					0.802					0.732	

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland and County AM
Site Code : 00003389
Start Date : 10/28/2008
Page No : 1

Groups Printed- Vehicles

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	0	271	4	0	275	1	0	11	0	12	51	61	0	2	114	0	0	0	0	0	401
06:45 AM	0	210	4	0	214	1	0	10	0	11	94	72	0	0	166	0	0	0	0	0	391
Total	0	481	8	0	489	2	0	21	0	23	145	133	0	2	280	0	0	0	0	0	792
07:00 AM	0	236	6	0	242	3	0	18	0	21	91	99	0	0	190	0	0	0	0	0	453
07:15 AM	0	312	13	0	325	8	0	18	0	26	119	111	0	0	230	0	0	0	0	0	581
07:30 AM	0	368	7	0	375	5	0	20	0	25	116	112	0	0	228	0	0	0	0	0	628
07:45 AM	0	369	11	0	380	6	0	31	0	37	108	77	0	0	185	0	0	0	0	0	602
Total	0	1285	37	0	1322	22	0	87	0	109	434	399	0	0	833	0	0	0	0	0	2264
08:00 AM	0	234	7	0	241	3	0	16	0	19	84	74	0	0	158	0	0	0	0	0	418
08:15 AM	0	214	9	0	223	2	0	15	0	17	73	80	0	0	153	0	0	0	0	0	393
Grand Total	0	2214	61	0	2275	29	0	139	0	168	736	686	0	2	1424	0	0	0	0	0	3867
Apprch %	0.0	97.3	2.7	0.0		17.3	0.0	82.7	0.0		51.7	48.2	0.0	0.1		0.0	0.0	0.0	0.0		
Total %	0.0	57.3	1.6	0.0	58.8	0.7	0.0	3.6	0.0	4.3	19.0	17.7	0.0	0.1	36.8	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	0	1285	37	0	1322	22	0	87	0	109	434	399	0	0	833	0	0	0	0	0	2264
Percent	0.0	97.2	2.8	0.0		20.2	0.0	79.8	0.0		52.1	47.9	0.0	0.0		0.0	0.0	0.0	0.0		
07:30 Volume	0	368	7	0	375	5	0	20	0	25	116	112	0	0	228	0	0	0	0	0	628
Peak Factor																					0.901
High Int.	07:45 AM					07:45 AM					07:15 AM					6:15:00 AM					
Volume	0	369	11	0	380	6	0	31	0	37	119	111	0	0	230						
Peak Factor					0.870					0.736					0.905						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland and County AM
Site Code : 00003389
Start Date : 10/28/2008
Page No : 1

Groups Printed- Trucks

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	0	1	1	0	2	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	5
06:45 AM	0	2	1	0	3	1	0	0	0	1	3	4	0	0	7	0	0	0	0	0	11
Total	0	3	2	0	5	1	0	1	0	2	3	6	0	0	9	0	0	0	0	0	16
07:00 AM	0	2	1	0	3	3	0	1	0	4	0	5	0	0	5	0	0	0	0	0	12
07:15 AM	0	3	0	0	3	3	0	0	0	3	4	5	0	0	9	0	0	0	0	0	15
07:30 AM	0	7	2	0	9	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	17
07:45 AM	0	2	0	0	2	0	0	0	0	0	3	2	0	0	5	0	0	0	0	0	7
Total	0	14	3	0	17	6	0	1	0	7	8	19	0	0	27	0	0	0	0	0	51
08:00 AM	0	3	0	0	3	1	0	3	0	4	2	5	0	0	7	0	0	0	0	0	14
08:15 AM	0	8	2	0	10	1	0	0	0	1	2	3	0	0	5	0	1	0	0	1	17
Grand Total	0	28	7	0	35	9	0	5	0	14	15	33	0	0	48	0	1	0	0	1	98
Apprch %	0.0	80.0	20.0	0.0		64.3	0.0	35.7	0.0		31.3	68.8	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	28.6	7.1	0.0	35.7	9.2	0.0	5.1	0.0	14.3	15.3	33.7	0.0	0.0	49.0	0.0	1.0	0.0	0.0	1.0	

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	06:45 AM																				
Volume	0	14	4	0	18	7	0	1	0	8	8	21	0	0	29	0	0	0	0	0	55
Percent	0.0	77.8	22.2	0.0		87.5	0.0	12.5	0.0		27.6	72.4	0.0	0.0		0.0	0.0	0.0	0.0		
07:30 Volume	0	7	2	0	9	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	17
Peak Factor																					0.809
High Int.	07:30 AM					07:00 AM					07:15 AM					6:15:00 AM					
Volume	0	7	2	0	9	3	0	1	0	4	4	5	0	0	9						
Peak Factor					0.500					0.500					0.806						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland and County AM
Site Code : 00003389
Start Date : 10/28/2008
Page No : 1

Groups Printed- Vehicles - Trucks

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	0	272	5	0	277	1	0	12	0	13	51	63	0	2	116	0	0	0	0	0	406
06:45 AM	0	212	5	0	217	2	0	10	0	12	97	76	0	0	173	0	0	0	0	0	402
Total	0	484	10	0	494	3	0	22	0	25	148	139	0	2	289	0	0	0	0	0	808
07:00 AM	0	238	7	0	245	6	0	19	0	25	91	104	0	0	195	0	0	0	0	0	465
07:15 AM	0	315	13	0	328	11	0	18	0	29	123	116	0	0	239	0	0	0	0	0	596
07:30 AM	0	375	9	0	384	5	0	20	0	25	117	119	0	0	236	0	0	0	0	0	645
07:45 AM	0	371	11	0	382	6	0	31	0	37	111	79	0	0	190	0	0	0	0	0	609
Total	0	1299	40	0	1339	28	0	88	0	116	442	418	0	0	860	0	0	0	0	0	2315
08:00 AM	0	237	7	0	244	4	0	19	0	23	86	79	0	0	165	0	0	0	0	0	432
08:15 AM	0	222	11	0	233	3	0	15	0	18	75	83	0	0	158	0	1	0	0	1	410
Grand Total	0	2242	68	0	2310	38	0	144	0	182	751	719	0	2	1472	0	1	0	0	1	3965
Apprch %	0.0	97.1	2.9	0.0		20.9	0.0	79.1	0.0		51.0	48.8	0.0	0.1		0.0	100.0	0.0	0.0		
Total %	0.0	56.5	1.7	0.0	58.3	1.0	0.0	3.6	0.0	4.6	18.9	18.1	0.0	0.1	37.1	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	0	1299	40	0	1339	28	0	88	0	116	442	418	0	0	860	0	0	0	0	0	2315
Percent	0.0	97.0	3.0	0.0		24.1	0.0	75.9	0.0		51.4	48.6	0.0	0.0		0.0	0.0	0.0	0.0		
07:30 Volume	0	375	9	0	384	5	0	20	0	25	117	119	0	0	236	0	0	0	0	0	645
Peak Factor																					0.897
High Int.	07:30 AM					07:45 AM					07:15 AM					6:15:00 AM					
Volume	0	375	9	0	384	6	0	31	0	37	123	116	0	0	239						
Peak Factor					0.872					0.784					0.900						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland and County PM
Site Code : 00003389
Start Date : 10/28/2008
Page No : 2

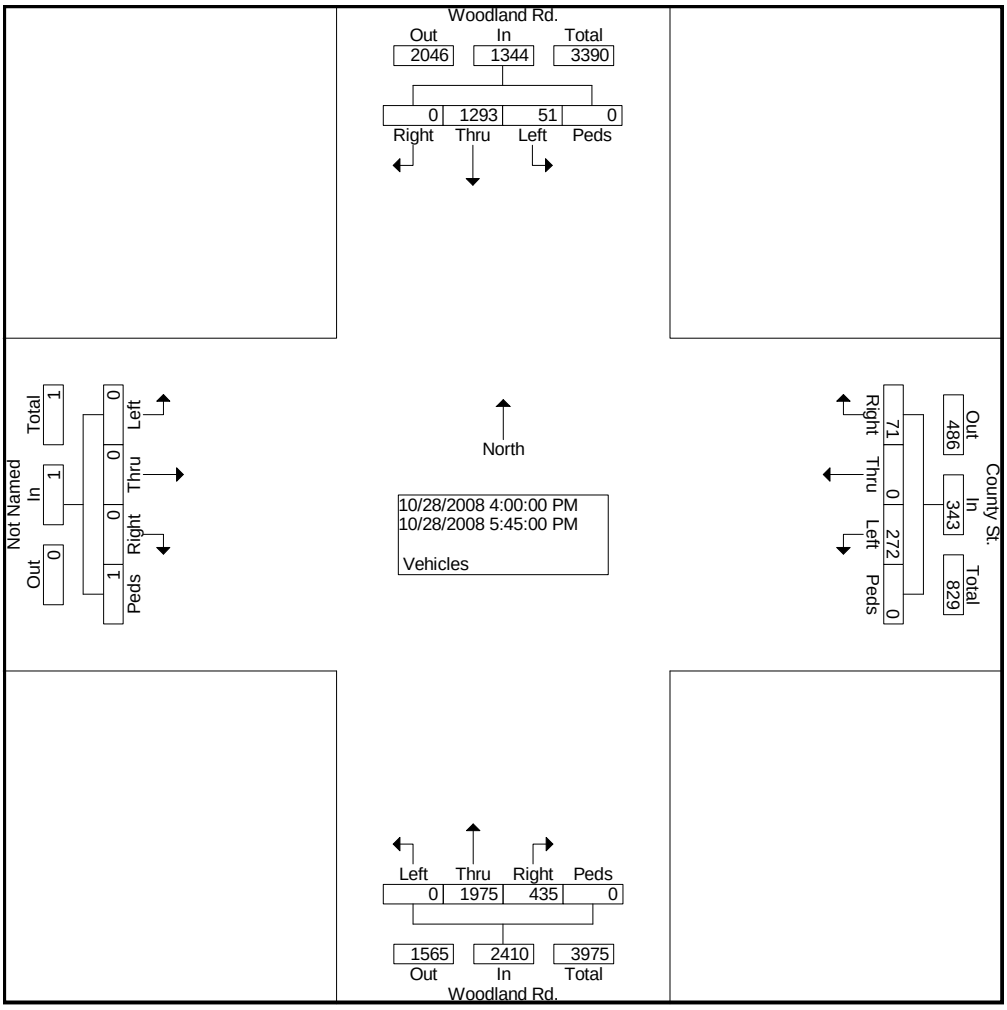
	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	0	661	22	0	683	39	0	147	0	186	242	986	0	0	1228	0	0	0	0	0	2097
Percent	0.0	96.8	3.2	0.0		21.0	0.0	79.0	0.0		19.7	80.3	0.0	0.0		0.0	0.0	0.0	0.0		
04:15 Volume	0	165	7	0	172	11	0	28	0	39	69	270	0	0	339	0	0	0	0	0	550
Peak Factor																					0.953
High Int.	05:00 PM					05:00 PM					04:15 PM					3:45:00 PM					
Volume	0	174	4	0	178	12	0	56	0	68	69	270	0	0	339						
Peak Factor					0.959					0.684					0.906						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland and County PM
Site Code : 00003389
Start Date : 10/28/2008
Page No : 1

Groups Printed- Vehicles

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	154	7	0	161	9	0	33	0	42	64	247	0	0	311	0	0	0	0	0	514
04:15 PM	0	165	7	0	172	11	0	28	0	39	69	270	0	0	339	0	0	0	0	0	550
04:30 PM	0	171	4	0	175	7	0	26	0	33	66	234	0	0	300	0	0	0	0	0	508
04:45 PM	0	151	7	0	158	9	0	37	0	46	59	244	0	0	303	0	0	0	0	0	507
Total	0	641	25	0	666	36	0	124	0	160	258	995	0	0	1253	0	0	0	0	0	2079
05:00 PM	0	174	4	0	178	12	0	56	0	68	48	238	0	0	286	0	0	0	0	0	532
05:15 PM	0	170	9	0	179	8	0	44	0	52	49	269	0	0	318	0	0	0	0	0	549
05:30 PM	0	140	3	0	143	11	0	25	0	36	39	256	0	0	295	0	0	0	0	0	474
05:45 PM	0	168	10	0	178	4	0	23	0	27	41	217	0	0	258	0	0	0	1	1	464
Total	0	652	26	0	678	35	0	148	0	183	177	980	0	0	1157	0	0	0	1	1	2019
Grand Total	0	1293	51	0	1344	71	0	272	0	343	435	1975	0	0	2410	0	0	0	1	1	4098
Apprch %	0.0	96.2	3.8	0.0		20.7	0.0	79.3	0.0		18.0	82.0	0.0	0.0		0.0	0.0	0.0	100.0		
Total %	0.0	31.6	1.2	0.0	32.8	1.7	0.0	6.6	0.0	8.4	10.6	48.2	0.0	0.0	58.8	0.0	0.0	0.0	0.0	0.0	



Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland and County PM
Site Code : 00003389
Start Date : 10/28/2008
Page No : 2

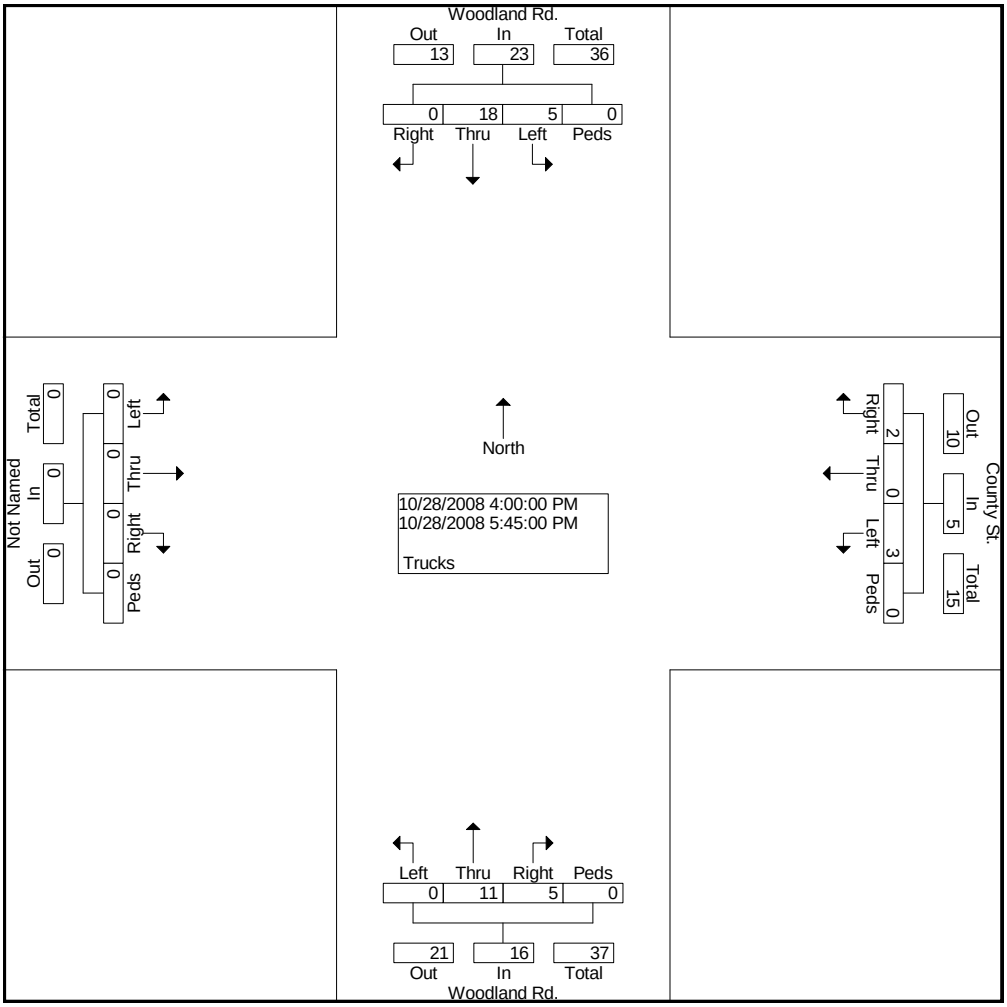
	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	0	15	2	0	17	1	0	2	0	3	2	8	0	0	10	0	0	0	0	0	30
Percent	0.0	88.2	11.8	0.0		33.3	0.0	66.7	0.0		20.0	80.0	0.0	0.0		0.0	0.0	0.0	0.0		
04:30 Volume	0	6	2	0	8	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	10
Peak Factor																					0.750
High Int.	04:30 PM					04:15 PM					04:00 PM					3:45:00 PM					
Volume	0	6	2	0	8	1	0	1	0	2	0	5	0	0	5						
Peak Factor					0.531					0.375					0.500						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland and County PM
Site Code : 00003389
Start Date : 10/28/2008
Page No : 1

Groups Printed- Trucks

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
04:15 PM	0	1	0	0	1	1	0	1	0	2	1	1	0	0	2	0	0	0	0	0	5
04:30 PM	0	6	2	0	8	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	10
04:45 PM	0	4	0	0	4	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	6
Total	0	15	2	0	17	1	0	2	0	3	2	8	0	0	10	0	0	0	0	0	30
05:00 PM	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	4
05:15 PM	0	0	0	0	0	1	0	1	0	2	1	1	0	0	2	0	0	0	0	0	4
05:30 PM	0	1	3	0	4	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	5
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	3	3	0	6	1	0	1	0	2	3	3	0	0	6	0	0	0	0	0	14
Grand Total	0	18	5	0	23	2	0	3	0	5	5	11	0	0	16	0	0	0	0	0	44
Apprch %	0.0	78.3	21.7	0.0		40.0	0.0	60.0	0.0		31.3	68.8	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	40.9	11.4	0.0	52.3	4.5	0.0	6.8	0.0	11.4	11.4	25.0	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	



Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland and County PM
Site Code : 00003389
Start Date : 10/28/2008
Page No : 2

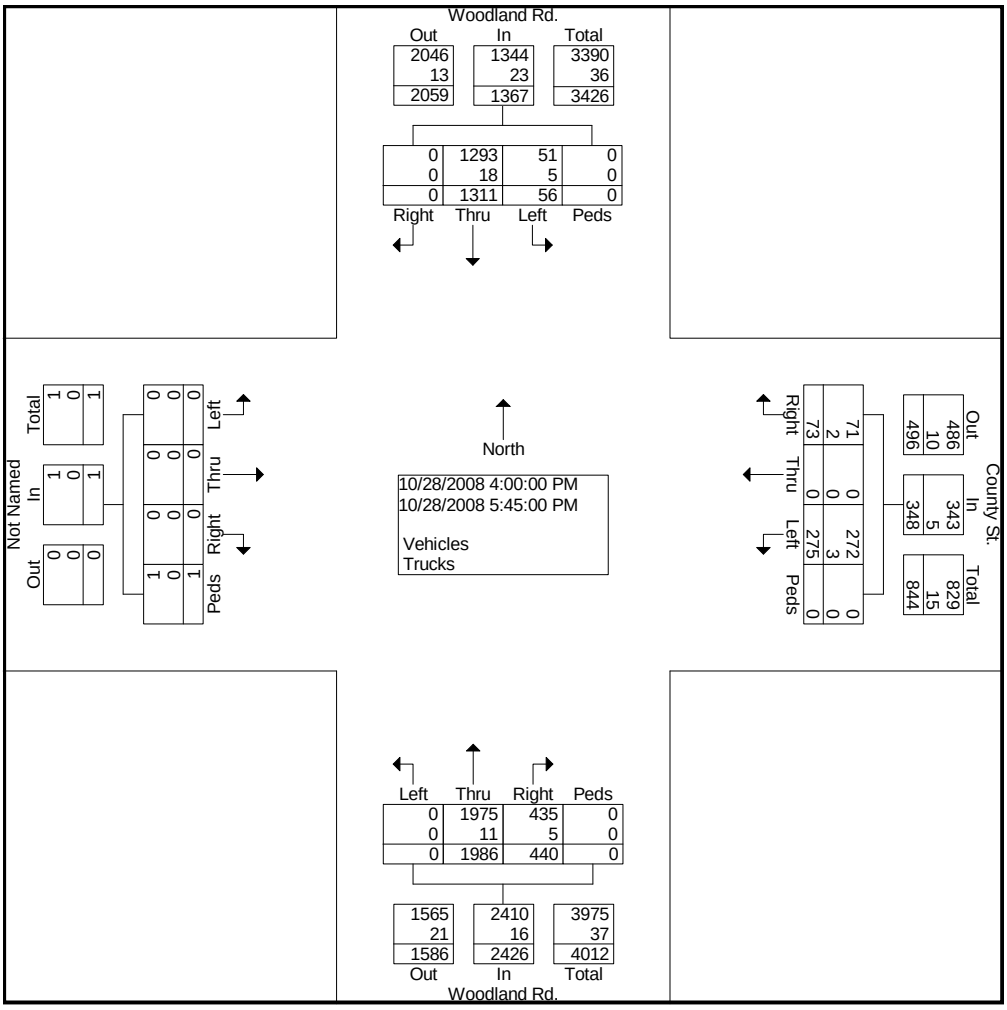
	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	0	674	24	0	698	40	0	149	0	189	245	990	0	0	1235	0	0	0	0	0	2122
Percent	0.0	96.6	3.4	0.0		21.2	0.0	78.8	0.0		19.8	80.2	0.0	0.0		0.0	0.0	0.0	0.0		
04:15 Volume	0	166	7	0	173	12	0	29	0	41	70	271	0	0	341	0	0	0	0	0	555
Peak Factor																					0.956
High Int.	04:30 PM					05:00 PM					04:15 PM					3:45:00 PM					
Volume	0	177	6	0	183	12	0	56	0	68	70	271	0	0	341						
Peak Factor					0.954					0.695					0.905						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland and County PM
Site Code : 00003389
Start Date : 10/28/2008
Page No : 1

Groups Printed- Vehicles - Trucks

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	158	7	0	165	9	0	33	0	42	64	252	0	0	316	0	0	0	0	0	523
04:15 PM	0	166	7	0	173	12	0	29	0	41	70	271	0	0	341	0	0	0	0	0	555
04:30 PM	0	177	6	0	183	7	0	26	0	33	67	235	0	0	302	0	0	0	0	0	518
04:45 PM	0	155	7	0	162	9	0	38	0	47	59	245	0	0	304	0	0	0	0	0	513
Total	0	656	27	0	683	37	0	126	0	163	260	1003	0	0	1263	0	0	0	0	0	2109
05:00 PM	0	176	4	0	180	12	0	56	0	68	49	239	0	0	288	0	0	0	0	0	536
05:15 PM	0	170	9	0	179	9	0	45	0	54	50	270	0	0	320	0	0	0	0	0	553
05:30 PM	0	141	6	0	147	11	0	25	0	36	40	256	0	0	296	0	0	0	0	0	479
05:45 PM	0	168	10	0	178	4	0	23	0	27	41	218	0	0	259	0	0	0	1	1	465
Total	0	655	29	0	684	36	0	149	0	185	180	983	0	0	1163	0	0	0	1	1	2033
Grand Total	0	1311	56	0	1367	73	0	275	0	348	440	1986	0	0	2426	0	0	0	1	1	4142
Apprch %	0.0	95.9	4.1	0.0		21.0	0.0	79.0	0.0		18.1	81.9	0.0	0.0		0.0	0.0	0.0	100.0		
Total %	0.0	31.7	1.4	0.0	33.0	1.8	0.0	6.6	0.0	8.4	10.6	47.9	0.0	0.0	58.6	0.0	0.0	0.0	0.0	0.0	



Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland Rd & I-64 WB Ramps AM
Site Code : 00003389
Start Date : 10/29/2008
Page No : 1

Groups Printed- 1 - Vehicles

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	156	114	0	0	270	21	0	19	0	40	0	87	15	0	102	0	0	0	0	0	412
06:45 AM	149	98	0	0	247	33	0	21	0	54	0	119	15	0	134	0	0	0	0	0	435
Total	305	212	0	0	517	54	0	40	0	94	0	206	30	0	236	0	0	0	0	0	847
07:00 AM	147	125	0	0	272	39	0	16	0	55	0	134	15	0	149	0	0	0	0	0	476
07:15 AM	185	128	0	0	313	34	0	27	0	61	0	245	18	0	263	0	0	0	0	0	637
07:30 AM	221	143	0	0	364	37	0	33	0	70	0	189	14	0	203	0	0	0	0	0	637
07:45 AM	208	198	0	0	406	21	0	42	0	63	0	127	16	0	143	0	0	0	0	0	612
Total	761	594	0	0	1355	131	0	118	0	249	0	695	63	0	758	0	0	0	0	0	2362
08:00 AM	136	120	0	0	256	35	0	53	0	88	0	109	34	0	143	0	0	0	0	0	487
08:15 AM	104	136	0	0	240	22	0	39	0	61	0	98	28	0	126	0	0	0	0	0	427
Grand Total	1306	1062	0	0	2368	242	0	250	0	492	0	1108	155	0	1263	0	0	0	0	0	4123
Apprch %	55.2	44.8	0.0	0.0		49.2	0.0	50.8	0.0		0.0	87.7	12.3	0.0		0.0	0.0	0.0	0.0		
Total %	31.7	25.8	0.0	0.0	57.4	5.9	0.0	6.1	0.0	11.9	0.0	26.9	3.8	0.0	30.6	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	750	589	0	0	1339	127	0	155	0	282	0	670	82	0	752	0	0	0	0	0	2373
Percent	56.0	44.0	0.0	0.0		45.0	0.0	55.0	0.0		0.0	89.1	10.9	0.0		0.0	0.0	0.0	0.0		
07:30 Volume	221	143	0	0	364	37	0	33	0	70	0	189	14	0	203	0	0	0	0	0	637
Peak Factor																					0.931
High Int.	07:45 AM					08:00 AM					07:15 AM					6:15:00 AM					
Volume	208	198	0	0	406	35	0	53	0	88	0	245	18	0	263						
Peak Factor					0.825					0.801					0.715						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland Rd & I-64 WB Ramps AM
Site Code : 00003389
Start Date : 10/29/2008
Page No : 1

Groups Printed- 2 - Trucks

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	0	1	0	0	1	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	6
06:45 AM	2	0	0	0	2	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	12
Total	2	1	0	0	3	0	0	1	0	1	0	13	1	0	14	0	0	0	0	0	18
07:00 AM	1	2	0	0	3	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	6
07:15 AM	5	2	0	0	7	1	0	2	0	3	0	5	0	0	5	0	0	0	0	0	15
07:30 AM	7	9	0	0	16	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	19
07:45 AM	3	0	0	0	3	0	0	1	0	1	0	5	2	0	7	0	0	0	0	0	11
Total	16	13	0	0	29	1	0	5	0	6	0	12	4	0	16	0	0	0	0	0	51
08:00 AM	0	2	0	0	2	0	0	4	0	4	0	4	1	0	5	0	0	0	0	0	11
08:15 AM	8	5	0	0	13	2	0	4	0	6	0	1	1	0	2	0	0	0	0	0	21
Grand Total	26	21	0	0	47	3	0	14	0	17	0	30	7	0	37	0	0	0	0	0	101
Apprch %	55.3	44.7	0.0	0.0		17.6	0.0	82.4	0.0		0.0	81.1	18.9	0.0		0.0	0.0	0.0	0.0		
Total %	25.7	20.8	0.0	0.0	46.5	3.0	0.0	13.9	0.0	16.8	0.0	29.7	6.9	0.0	36.6	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	18	16	0	0	34	2	0	9	0	11	0	11	6	0	17	0	0	0	0	0	62
Percent	52.9	47.1	0.0	0.0		18.2	0.0	81.8	0.0		0.0	64.7	35.3	0.0		0.0	0.0	0.0	0.0		
08:15 Volume	8	5	0	0	13	2	0	4	0	6	0	1	1	0	2	0	0	0	0	0	21
Peak Factor																					0.738
High Int.	07:30 AM					08:15 AM					07:45 AM					6:15:00 AM					
Volume	7	9	0	0	16	2	0	4	0	6	0	5	2	0	7						
Peak Factor					0.531					0.458					0.607						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland Rd & I-64 WB Ramps AM
Site Code : 00003389
Start Date : 10/29/2008
Page No : 1

Groups Printed- 1 - Vehicles - 2 - Trucks

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	156	115	0	0	271	21	0	20	0	41	0	91	15	0	106	0	0	0	0	0	418
06:45 AM	151	98	0	0	249	33	0	21	0	54	0	128	16	0	144	0	0	0	0	0	447
Total	307	213	0	0	520	54	0	41	0	95	0	219	31	0	250	0	0	0	0	0	865
07:00 AM	148	127	0	0	275	39	0	18	0	57	0	135	15	0	150	0	0	0	0	0	482
07:15 AM	190	130	0	0	320	35	0	29	0	64	0	250	18	0	268	0	0	0	0	0	652
07:30 AM	228	152	0	0	380	37	0	33	0	70	0	190	16	0	206	0	0	0	0	0	656
07:45 AM	211	198	0	0	409	21	0	43	0	64	0	132	18	0	150	0	0	0	0	0	623
Total	777	607	0	0	1384	132	0	123	0	255	0	707	67	0	774	0	0	0	0	0	2413
08:00 AM	136	122	0	0	258	35	0	57	0	92	0	113	35	0	148	0	0	0	0	0	498
08:15 AM	112	141	0	0	253	24	0	43	0	67	0	99	29	0	128	0	0	0	0	0	448
Grand Total	1332	1083	0	0	2415	245	0	264	0	509	0	1138	162	0	1300	0	0	0	0	0	4224
Apprch %	55.2	44.8	0.0	0.0		48.1	0.0	51.9	0.0		0.0	87.5	12.5	0.0		0.0	0.0	0.0	0.0		
Total %	31.5	25.6	0.0	0.0	57.2	5.8	0.0	6.3	0.0	12.1	0.0	26.9	3.8	0.0	30.8	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	765	602	0	0	1367	128	0	162	0	290	0	685	87	0	772	0	0	0	0	0	2429
Percent	56.0	44.0	0.0	0.0		44.1	0.0	55.9	0.0		0.0	88.7	11.3	0.0		0.0	0.0	0.0	0.0		
07:30 Volume	228	152	0	0	380	37	0	33	0	70	0	190	16	0	206	0	0	0	0	0	656
Peak Factor																					0.926
High Int.	07:45 AM					08:00 AM					07:15 AM					6:15:00 AM					
Volume	211	198	0	0	409	35	0	57	0	92	0	250	18	0	268						
Peak Factor					0.836					0.788					0.720						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland Rd & I-64 WB Ramps PM
Site Code : 00003389
Start Date : 10/29/2008
Page No : 1

Groups Printed- 1 - Vehicles

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	84	96	0	0	180	56	0	52	0	108	0	168	102	0	270	0	0	0	0	0	558
04:15 PM	83	84	0	0	167	86	0	60	0	146	0	214	98	0	312	0	0	0	0	0	625
04:30 PM	109	85	0	0	194	88	0	54	0	142	0	215	118	0	333	0	0	0	0	0	669
04:45 PM	100	95	0	0	195	89	0	52	0	141	0	234	93	0	327	0	0	0	0	0	663
Total	376	360	0	0	736	319	0	218	0	537	0	831	411	0	1242	0	0	0	0	0	2515
05:00 PM	122	89	0	0	211	83	0	65	0	148	0	211	124	0	335	0	0	0	0	0	694
05:15 PM	95	92	0	0	187	79	0	53	0	132	0	248	114	0	362	0	0	0	0	0	681
05:30 PM	81	95	0	0	176	85	0	64	0	149	0	199	83	0	282	0	0	0	0	0	607
05:45 PM	60	91	0	0	151	79	0	49	0	128	0	159	73	0	232	0	0	0	0	0	511
Total	358	367	0	0	725	326	0	231	0	557	0	817	394	0	1211	0	0	0	0	0	2493
Grand Total	734	727	0	0	1461	645	0	449	0	1094	0	1648	805	0	2453	0	0	0	0	0	5008
Apprch %	50.2	49.8	0.0	0.0		59.0	0.0	41.0	0.0		0.0	67.2	32.8	0.0		0.0	0.0	0.0	0.0		
Total %	14.7	14.5	0.0	0.0	29.2	12.9	0.0	9.0	0.0	21.8	0.0	32.9	16.1	0.0	49.0	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	426	361	0	0	787	339	0	224	0	563	0	908	449	0	1357	0	0	0	0	0	2707
Percent	54.1	45.9	0.0	0.0		60.2	0.0	39.8	0.0		0.0	66.9	33.1	0.0		0.0	0.0	0.0	0.0		
05:00 Volume	122	89	0	0	211	83	0	65	0	148	0	211	124	0	335	0	0	0	0	0	694
Peak Factor																					0.975
High Int.	05:00 PM					05:00 PM					05:15 PM					3:45:00 PM					
Volume	122	89	0	0	211	83	0	65	0	148	0	248	114	0	362						
Peak Factor					0.932					0.951					0.937						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland Rd & I-64 WB Ramps PM
Site Code : 00003389
Start Date : 10/29/2008
Page No : 1

Groups Printed- 2 - Trucks

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	6	2	0	0	8	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	13
04:15 PM	3	1	0	0	4	1	0	4	0	5	0	1	1	0	2	0	0	0	0	0	11
04:30 PM	2	5	0	0	7	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	10
04:45 PM	0	1	0	0	1	0	0	2	0	2	0	3	0	0	3	0	0	0	0	0	6
Total	11	9	0	0	20	2	0	7	0	9	0	10	1	0	11	0	0	0	0	0	40
05:00 PM	2	1	0	0	3	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	6
05:15 PM	1	0	0	0	1	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	5
05:30 PM	1	1	0	0	2	0	0	2	0	2	0	0	1	0	1	0	0	0	0	0	5
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Total	4	2	0	0	6	1	0	4	0	5	0	4	2	0	6	0	0	0	0	0	17
Grand Total	15	11	0	0	26	3	0	11	0	14	0	14	3	0	17	0	0	0	0	0	57
Apprch %	57.7	42.3	0.0	0.0		21.4	0.0	78.6	0.0		0.0	82.4	17.6	0.0		0.0	0.0	0.0	0.0		
Total %	26.3	19.3	0.0	0.0	45.6	5.3	0.0	19.3	0.0	24.6	0.0	24.6	5.3	0.0	29.8	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	11	9	0	0	20	2	0	7	0	9	0	10	1	0	11	0	0	0	0	0	40
Percent	55.0	45.0	0.0	0.0		22.2	0.0	77.8	0.0		0.0	90.9	9.1	0.0		0.0	0.0	0.0	0.0		
04:00 Volume	6	2	0	0	8	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	13
Peak Factor																					0.769
High Int.	04:00 PM					04:15 PM					04:00 PM					3:45:00 PM					
Volume	6	2	0	0	8	1	0	4	0	5	0	5	0	0	5						
Peak Factor					0.625					0.450					0.550						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Woodland Rd & I-64 WB Ramps PM
Site Code : 00003389
Start Date : 10/29/2008
Page No : 1

Groups Printed- 1 - Vehicles - 2 - Trucks

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	90	98	0	0	188	56	0	52	0	108	0	173	102	0	275	0	0	0	0	0	571
04:15 PM	86	85	0	0	171	87	0	64	0	151	0	215	99	0	314	0	0	0	0	0	636
04:30 PM	111	90	0	0	201	89	0	55	0	144	0	216	118	0	334	0	0	0	0	0	679
04:45 PM	100	96	0	0	196	89	0	54	0	143	0	237	93	0	330	0	0	0	0	0	669
Total	387	369	0	0	756	321	0	225	0	546	0	841	412	0	1253	0	0	0	0	0	2555
05:00 PM	124	90	0	0	214	84	0	65	0	149	0	213	124	0	337	0	0	0	0	0	700
05:15 PM	96	92	0	0	188	79	0	55	0	134	0	250	114	0	364	0	0	0	0	0	686
05:30 PM	82	96	0	0	178	85	0	66	0	151	0	199	84	0	283	0	0	0	0	0	612
05:45 PM	60	91	0	0	151	79	0	49	0	128	0	159	74	0	233	0	0	0	0	0	512
Total	362	369	0	0	731	327	0	235	0	562	0	821	396	0	1217	0	0	0	0	0	2510
Grand Total	749	738	0	0	1487	648	0	460	0	1108	0	1662	808	0	2470	0	0	0	0	0	5065
Apprch %	50.4	49.6	0.0	0.0		58.5	0.0	41.5	0.0		0.0	67.3	32.7	0.0		0.0	0.0	0.0	0.0		
Total %	14.8	14.6	0.0	0.0	29.4	12.8	0.0	9.1	0.0	21.9	0.0	32.8	16.0	0.0	48.8	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	431	368	0	0	799	341	0	229	0	570	0	916	449	0	1365	0	0	0	0	0	2734
Percent	53.9	46.1	0.0	0.0		59.8	0.0	40.2	0.0		0.0	67.1	32.9	0.0		0.0	0.0	0.0	0.0		
05:00 Volume	124	90	0	0	214	84	0	65	0	149	0	213	124	0	337	0	0	0	0	0	700
Peak Factor																					0.976
High Int.	05:00 PM					05:00 PM					05:15 PM					3:45:00 PM					
Volume	124	90	0	0	214	84	0	65	0	149	0	250	114	0	364						
Peak Factor					0.933					0.956					0.938						

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Settler Landing and Tyler St. AM
Site Code : 00003001
Start Date : 11/5/2008
Page No : 1

Groups Printed- Vehicles

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	36	114	0	0	150	7	72	106	0	185	0	29	6	0	35	9	0	2	0	11	381
06:45 AM	69	146	0	0	215	7	52	64	0	123	0	41	43	0	84	15	0	4	0	19	441
Total	105	260	0	0	365	14	124	170	0	308	0	70	49	0	119	24	0	6	0	30	822
07:00 AM	101	196	0	0	297	5	66	74	0	145	0	32	41	0	73	8	0	7	0	15	530
07:15 AM	105	218	0	0	323	5	60	101	0	166	0	50	35	0	85	21	0	4	0	25	599
07:30 AM	73	252	0	0	325	4	62	63	0	129	0	62	44	0	106	15	0	6	0	21	581
07:45 AM	112	171	0	0	283	21	87	75	0	183	0	114	78	0	192	12	0	7	0	19	677
Total	391	837	0	0	1228	35	275	313	0	623	0	258	198	0	456	56	0	24	0	80	2387
08:00 AM	55	161	0	0	216	12	100	74	0	186	0	49	41	0	90	21	0	11	0	32	524
08:15 AM	59	142	0	0	201	22	82	106	0	210	0	80	41	0	121	36	0	8	0	44	576
Grand Total	610	1400	0	0	2010	83	581	663	0	1327	0	457	329	0	786	137	0	49	0	186	4309
Apprch %	30.3	69.7	0.0	0.0		6.3	43.8	50.0	0.0		0.0	58.1	41.9	0.0		73.7	0.0	26.3	0.0		
Total %	14.2	32.5	0.0	0.0	46.6	1.9	13.5	15.4	0.0	30.8	0.0	10.6	7.6	0.0	18.2	3.2	0.0	1.1	0.0	4.3	

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	391	837	0	0	1228	35	275	313	0	623	0	258	198	0	456	56	0	24	0	80	2387
Percent	31.8	68.2	0.0	0.0		5.6	44.1	50.2	0.0		0.0	56.6	43.4	0.0		70.0	0.0	30.0	0.0		
07:45 Volume	112	171	0	0	283	21	87	75	0	183	0	114	78	0	192	12	0	7	0	19	677
Peak Factor																					0.881
High Int.	07:30 AM					07:45 AM					07:45 AM					07:15 AM					
Volume	73	252	0	0	325	21	87	75	0	183	0	114	78	0	192	21	0	4	0	25	
Peak Factor					0.945					0.851					0.594					0.800	

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Settler Landing and Tyler St. AM
Site Code : 00003001
Start Date : 11/5/2008
Page No : 1

Groups Printed- Trucks

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	1	3	0	0	4	0	0	1	0	1	0	2	0	0	2	0	0	1	0	1	8
06:45 AM	0	6	0	0	6	0	1	3	0	4	0	0	2	0	2	1	0	1	0	2	14
Total	1	9	0	0	10	0	1	4	0	5	0	2	2	0	4	1	0	2	0	3	22
07:00 AM	0	11	0	0	11	0	0	2	0	2	0	2	2	0	4	2	0	1	0	3	20
07:15 AM	1	13	0	0	14	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	16
07:30 AM	0	4	0	0	4	0	0	0	0	0	0	9	1	0	10	1	0	2	0	3	17
07:45 AM	1	7	0	0	8	1	0	2	0	3	0	3	1	0	4	0	0	0	0	0	15
Total	2	35	0	0	37	1	0	5	0	6	0	15	4	0	19	3	0	3	0	6	68
08:00 AM	0	9	0	0	9	0	0	1	0	1	0	5	1	0	6	2	0	1	0	3	19
08:15 AM	1	5	0	0	6	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	10
Grand Total	4	58	0	0	62	1	1	12	0	14	0	24	7	0	31	6	0	6	0	12	119
Apprch %	6.5	93.5	0.0	0.0		7.1	7.1	85.7	0.0		0.0	77.4	22.6	0.0		50.0	0.0	50.0	0.0		
Total %	3.4	48.7	0.0	0.0	52.1	0.8	0.8	10.1	0.0	11.8	0.0	20.2	5.9	0.0	26.1	5.0	0.0	5.0	0.0	10.1	

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	2	35	0	0	37	1	0	5	0	6	0	15	4	0	19	3	0	3	0	6	68
Percent	5.4	94.6	0.0	0.0		16.7	0.0	83.3	0.0		0.0	78.9	21.1	0.0		50.0	0.0	50.0	0.0		
07:00 Volume	0	11	0	0	11	0	0	2	0	2	0	2	2	0	4	2	0	1	0	3	20
Peak Factor																					0.850
High Int.	07:15 AM					07:45 AM					07:30 AM					07:00 AM					
Volume	1	13	0	0	14	1	0	2	0	3	0	9	1	0	10	2	0	1	0	3	
Peak Factor					0.661					0.500					0.475					0.500	

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Settler Landing and Tyler St. AM
Site Code : 00003001
Start Date : 11/5/2008
Page No : 1

Groups Printed- Vehicles - Trucks

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:30 AM	37	117	0	0	154	7	72	107	0	186	0	31	6	0	37	9	0	3	0	12	389
06:45 AM	69	152	0	0	221	7	53	67	0	127	0	41	45	0	86	16	0	5	0	21	455
Total	106	269	0	0	375	14	125	174	0	313	0	72	51	0	123	25	0	8	0	33	844
07:00 AM	101	207	0	0	308	5	66	76	0	147	0	34	43	0	77	10	0	8	0	18	550
07:15 AM	106	231	0	0	337	5	60	102	0	167	0	51	35	0	86	21	0	4	0	25	615
07:30 AM	73	256	0	0	329	4	62	63	0	129	0	71	45	0	116	16	0	8	0	24	598
07:45 AM	113	178	0	0	291	22	87	77	0	186	0	117	79	0	196	12	0	7	0	19	692
Total	393	872	0	0	1265	36	275	318	0	629	0	273	202	0	475	59	0	27	0	86	2455
08:00 AM	55	170	0	0	225	12	100	75	0	187	0	54	42	0	96	23	0	12	0	35	543
08:15 AM	60	147	0	0	207	22	82	108	0	212	0	82	41	0	123	36	0	8	0	44	586
Grand Total	614	1458	0	0	2072	84	582	675	0	1341	0	481	336	0	817	143	0	55	0	198	4428
Apprch %	29.6	70.4	0.0	0.0		6.3	43.4	50.3	0.0		0.0	58.9	41.1	0.0		72.2	0.0	27.8	0.0		
Total %	13.9	32.9	0.0	0.0	46.8	1.9	13.1	15.2	0.0	30.3	0.0	10.9	7.6	0.0	18.5	3.2	0.0	1.2	0.0	4.5	

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	393	872	0	0	1265	36	275	318	0	629	0	273	202	0	475	59	0	27	0	86	2455
Percent	31.1	68.9	0.0	0.0		5.7	43.7	50.6	0.0		0.0	57.5	42.5	0.0		68.6	0.0	31.4	0.0		
07:45 Volume	113	178	0	0	291	22	87	77	0	186	0	117	79	0	196	12	0	7	0	19	692
Peak Factor																					0.887
High Int.	07:15 AM					07:45 AM					07:45 AM					07:15 AM					
Volume	106	231	0	0	337	22	87	77	0	186	0	117	79	0	196	21	0	4	0	25	
Peak Factor					0.938					0.845					0.606					0.860	

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Settler Landing and Tyler St. PM
Site Code : 00003001
Start Date : 11/5/2008
Page No : 1

Groups Printed- Vehicles

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	24	149	0	0	173	10	18	78	0	106	0	77	14	0	91	100	0	51	0	151	521
04:15 PM	23	172	0	0	195	14	38	104	0	156	0	86	20	0	106	95	0	31	0	126	583
04:30 PM	15	178	0	0	193	17	38	85	0	140	0	85	9	0	94	111	0	52	2	165	592
04:45 PM	34	160	0	0	194	10	21	73	0	104	0	77	26	0	103	95	0	29	0	124	525
Total	96	659	0	0	755	51	115	340	0	506	0	325	69	0	394	401	0	163	2	566	2221
05:00 PM	15	206	0	0	221	3	22	91	0	116	0	87	21	0	108	113	0	63	0	176	621
05:15 PM	15	217	0	0	232	9	21	127	1	158	0	89	15	0	104	88	0	53	1	142	636
05:30 PM	11	115	0	0	126	12	25	95	0	132	0	80	17	0	97	72	0	32	10	114	469
05:45 PM	7	121	0	0	128	16	28	94	0	138	0	93	18	0	111	53	0	26	0	79	456
Total	48	659	0	0	707	40	96	407	1	544	0	349	71	0	420	326	0	174	11	511	2182
Grand Total	144	1318	0	0	1462	91	211	747	1	1050	0	674	140	0	814	727	0	337	13	1077	4403
Apprch %	9.8	90.2	0.0	0.0		8.7	20.1	71.1	0.1		0.0	82.8	17.2	0.0		67.5	0.0	31.3	1.2		
Total %	3.3	29.9	0.0	0.0	33.2	2.1	4.8	17.0	0.0	23.8	0.0	15.3	3.2	0.0	18.5	16.5	0.0	7.7	0.3	24.5	

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	79	761	0	0	840	39	102	376	1	518	0	338	71	0	409	407	0	197	3	607	2374
Percent	9.4	90.6	0.0	0.0		7.5	19.7	72.6	0.2		0.0	82.6	17.4	0.0		67.1	0.0	32.5	0.5		
05:15 Volume	15	217	0	0	232	9	21	127	1	158	0	89	15	0	104	88	0	53	1	142	636
Peak Factor																					0.933
High Int.	05:15 PM					05:15 PM					05:00 PM					05:00 PM					
Volume	15	217	0	0	232	9	21	127	1	158	0	87	21	0	108	113	0	63	0	176	
Peak Factor					0.905					0.820					0.947					0.862	

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Settler Landing and Tyler St. PM
Site Code : 00003001
Start Date : 11/5/2008
Page No : 1

Groups Printed- Trucks

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	3	0	0	3	0	0	3	0	3	0	5	1	0	6	0	0	0	0	0	12
04:15 PM	0	5	0	0	5	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	7
04:30 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	1	0	1	0	2	6
04:45 PM	0	7	0	0	7	1	0	1	0	2	0	2	0	0	2	0	0	0	0	0	11
Total	0	16	0	0	16	1	0	5	0	6	0	10	1	0	11	1	0	2	0	3	36
05:00 PM	0	3	0	0	3	0	0	2	0	2	0	1	0	0	1	0	0	1	0	1	7
05:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	6
05:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	8	0	0	8	0	0	2	0	2	0	4	0	0	4	2	0	2	0	4	18
Grand Total	0	24	0	0	24	1	0	7	0	8	0	14	1	0	15	3	0	4	0	7	54
Apprch %	0.0	100.0	0.0	0.0		12.5	0.0	87.5	0.0		0.0	93.3	6.7	0.0		42.9	0.0	57.1	0.0		
Total %	0.0	44.4	0.0	0.0	44.4	1.9	0.0	13.0	0.0	14.8	0.0	25.9	1.9	0.0	27.8	5.6	0.0	7.4	0.0	13.0	

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	0	16	0	0	16	1	0	5	0	6	0	10	1	0	11	1	0	2	0	3	36
Percent	0.0	100.0	0.0	0.0		16.7	0.0	83.3	0.0		0.0	90.9	9.1	0.0		33.3	0.0	66.7	0.0		
04:00 Volume	0	3	0	0	3	0	0	3	0	3	0	5	1	0	6	0	0	0	0	0	12
Peak Factor																					0.750
High Int.	04:45 PM					04:00 PM					04:00 PM					04:30 PM					
Volume	0	7	0	0	7	0	0	3	0	3	0	5	1	0	6	1	0	1	0	2	
Peak Factor					0.571					0.500					0.458					0.375	

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : Settler Landing and Tyler St. PM
Site Code : 00003001
Start Date : 11/5/2008
Page No : 1

Groups Printed- Vehicles - Trucks

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	24	152	0	0	176	10	18	81	0	109	0	82	15	0	97	100	0	51	0	151	533
04:15 PM	23	177	0	0	200	14	38	105	0	157	0	86	20	0	106	95	0	32	0	127	590
04:30 PM	15	179	0	0	194	17	38	85	0	140	0	88	9	0	97	112	0	53	2	167	598
04:45 PM	34	167	0	0	201	11	21	74	0	106	0	79	26	0	105	95	0	29	0	124	536
Total	96	675	0	0	771	52	115	345	0	512	0	335	70	0	405	402	0	165	2	569	2257
05:00 PM	15	209	0	0	224	3	22	93	0	118	0	88	21	0	109	113	0	64	0	177	628
05:15 PM	15	220	0	0	235	9	21	127	1	158	0	91	15	0	106	89	0	53	1	143	642
05:30 PM	11	117	0	0	128	12	25	95	0	132	0	80	17	0	97	73	0	33	10	116	473
05:45 PM	7	121	0	0	128	16	28	94	0	138	0	94	18	0	112	53	0	26	0	79	457
Total	48	667	0	0	715	40	96	409	1	546	0	353	71	0	424	328	0	176	11	515	2200
Grand Total	144	1342	0	0	1486	92	211	754	1	1058	0	688	141	0	829	730	0	341	13	1084	4457
Apprch %	9.7	90.3	0.0	0.0		8.7	19.9	71.3	0.1		0.0	83.0	17.0	0.0		67.3	0.0	31.5	1.2		
Total %	3.2	30.1	0.0	0.0	33.3	2.1	4.7	16.9	0.0	23.7	0.0	15.4	3.2	0.0	18.6	16.4	0.0	7.7	0.3	24.3	

	Settler Landing Southbound					I-64 EB Off Ramp Westbound					Settler Landing Northbound					Tyler St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	79	775	0	0	854	40	102	379	1	522	0	346	71	0	417	409	0	199	3	611	2404
Percent	9.3	90.7	0.0	0.0		7.7	19.5	72.6	0.2		0.0	83.0	17.0	0.0		66.9	0.0	32.6	0.5		
05:15 Volume	15	220	0	0	235	9	21	127	1	158	0	91	15	0	106	89	0	53	1	143	642
Peak Factor																					0.936
High Int.	05:15 PM					05:15 PM					05:00 PM					05:00 PM					
Volume	15	220	0	0	235	9	21	127	1	158	0	88	21	0	109	113	0	64	0	177	
Peak Factor					0.909					0.826					0.956					0.863	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and I-64 EB Off Ramp SAT
Site Code : 00005802
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles

	Mallory St. Southbound					I-64 EB On Ramp Westbound					Mallory St. Northbound					I-64 Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	25	29	0	54	0	0	0	0	0	2	18	0	0	20	3	0	41	0	44	118
11:45 AM	0	32	32	0	64	0	0	0	0	0	3	10	0	0	13	6	0	34	0	40	117
Total	0	57	61	0	118	0	0	0	0	0	5	28	0	0	33	9	0	75	0	84	235
12:00 PM	0	33	29	0	62	0	0	0	0	0	5	19	0	0	24	8	0	42	0	50	136
12:15 PM	0	14	31	0	45	0	0	0	0	0	3	22	0	0	25	11	0	35	0	46	116
12:30 PM	0	13	33	0	46	0	0	0	0	0	8	23	0	0	31	2	0	41	0	43	120
12:45 PM	0	14	23	0	37	0	0	0	0	0	6	14	0	0	20	5	0	56	0	61	118
Total	0	74	116	0	190	0	0	0	0	0	22	78	0	0	100	26	0	174	0	200	490
01:00 PM	0	12	28	0	40	0	0	0	0	0	28	10	0	0	38	8	0	54	0	62	140
01:15 PM	0	16	34	0	50	0	0	0	0	0	25	29	0	0	54	2	0	50	0	52	156
Grand Total	0	159	239	0	398	0	0	0	0	0	80	145	0	0	225	45	0	353	0	398	1021
Apprch %	0.0	39.9	60.1	0.0		0.0	0.0	0.0	0.0		35.6	64.4	0.0	0.0		11.3	0.0	88.7	0.0		
Total %	0.0	15.6	23.4	0.0	39.0	0.0	0.0	0.0	0.0	0.0	7.8	14.2	0.0	0.0	22.0	4.4	0.0	34.6	0.0	39.0	

	Mallory St. Southbound					I-64 EB On Ramp Westbound					Mallory St. Northbound					I-64 Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	12:30 PM																				
Volume	0	55	118	0	173	0	0	0	0	0	67	76	0	0	143	17	0	201	0	218	534
Percent	0.0	31.8	68.2	0.0		0.0	0.0	0.0	0.0		46.9	53.1	0.0	0.0		7.8	0.0	92.2	0.0		
01:15 Volume	0	16	34	0	50	0	0	0	0	0	25	29	0	0	54	2	0	50	0	52	156
Peak Factor																					0.856
High Int.	01:15 PM					11:15:00 AM					01:15 PM					01:00 PM					
Volume	0	16	34	0	50	0	0	0	0	0	25	29	0	0	54	8	0	54	0	62	
Peak Factor					0.865										0.662					0.879	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and I-64 EB Off Ramp SAT
Site Code : 00005802
Start Date : 11/8/2008
Page No : 1

Groups Printed- Heavy Trucks

	Mallory St. Southbound					I-64 EB On Ramp Westbound					Mallory St. Northbound					I-64 Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
12:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	5
Apprch %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	0.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	60.0	

	Mallory St. Southbound					I-64 EB On Ramp Westbound					Mallory St. Northbound					I-64 Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	4
Percent	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
12:00 Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Peak Factor																					0.500
High Int.	12:15 PM					11:15:00 AM					11:15:00 AM					12:00 PM					
Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
Peak Factor					0.250															0.375	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and I-64 EB Off Ramp SAT
Site Code : 00005802
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles - Heavy Trucks

	Mallory St. Southbound					I-64 EB On Ramp Westbound					Mallory St. Northbound					I-64 Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	25	29	0	54	0	0	0	0	0	2	18	0	0	20	3	0	41	0	44	118
11:45 AM	0	32	32	0	64	0	0	0	0	0	3	10	0	0	13	6	0	35	0	41	118
Total	0	57	61	0	118	0	0	0	0	0	5	28	0	0	33	9	0	76	0	85	236
12:00 PM	0	33	29	0	62	0	0	0	0	0	5	19	0	0	24	8	0	44	0	52	138
12:15 PM	0	15	31	0	46	0	0	0	0	0	3	22	0	0	25	11	0	35	0	46	117
12:30 PM	0	13	33	0	46	0	0	0	0	0	8	23	0	0	31	2	0	41	0	43	120
12:45 PM	0	14	23	0	37	0	0	0	0	0	6	14	0	0	20	5	0	56	0	61	118
Total	0	75	116	0	191	0	0	0	0	0	22	78	0	0	100	26	0	176	0	202	493
01:00 PM	0	12	28	0	40	0	0	0	0	0	28	10	0	0	38	8	0	54	0	62	140
01:15 PM	0	17	34	0	51	0	0	0	0	0	25	29	0	0	54	2	0	50	0	52	157
Grand Total	0	161	239	0	400	0	0	0	0	0	80	145	0	0	225	45	0	356	0	401	1026
Apprch %	0.0	40.3	59.8	0.0		0.0	0.0	0.0	0.0		35.6	64.4	0.0	0.0		11.2	0.0	88.8	0.0		
Total %	0.0	15.7	23.3	0.0	39.0	0.0	0.0	0.0	0.0	0.0	7.8	14.1	0.0	0.0	21.9	4.4	0.0	34.7	0.0	39.1	

	Mallory St. Southbound					I-64 EB On Ramp Westbound					Mallory St. Northbound					I-64 Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	12:30 PM																				
Volume	0	56	118	0	174	0	0	0	0	0	67	76	0	0	143	17	0	201	0	218	535
Percent	0.0	32.2	67.8	0.0		0.0	0.0	0.0	0.0		46.9	53.1	0.0	0.0		7.8	0.0	92.2	0.0		
01:15 Volume	0	17	34	0	51	0	0	0	0	0	25	29	0	0	54	2	0	50	0	52	157
Peak Factor																					0.852
High Int.	01:15 PM					11:15:00 AM					01:15 PM					01:00 PM					
Volume	0	17	34	0	51	0	0	0	0	0	25	29	0	0	54	8	0	54	0	62	
Peak Factor					0.853										0.662					0.879	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and I-64 WB_Segar St. SAT
Site Code : 00003004
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles

	Mallory St. Southbound					Segar St. Westbound					Mallory St. Northbound					I-64 WB Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	57	39	0	0	96	0	6	0	0	6	3	44	10	0	57	19	0	19	0	38	197
11:45 AM	55	31	0	0	86	0	9	5	0	14	2	38	4	0	44	29	3	23	0	55	199
Total	112	70	0	0	182	0	15	5	0	20	5	82	14	0	101	48	3	42	0	93	396
12:00 PM	67	38	0	0	105	0	8	2	0	10	2	44	13	0	59	22	0	25	0	47	221
12:15 PM	62	34	1	0	97	2	12	3	0	17	2	42	13	0	57	6	3	30	0	39	210
12:30 PM	51	40	1	0	92	2	5	3	0	10	2	48	16	0	66	5	3	21	0	29	197
12:45 PM	49	33	1	0	83	1	3	1	0	5	2	54	12	0	68	3	0	28	0	31	187
Total	229	145	3	0	377	5	28	9	0	42	8	188	54	0	250	36	6	104	0	146	815
01:00 PM	39	33	0	1	73	2	13	1	0	16	4	46	13	0	63	4	1	24	0	29	181
01:15 PM	38	45	0	0	83	0	10	3	0	13	3	57	17	0	77	5	2	29	0	36	209
Grand Total	418	293	3	1	715	7	66	18	0	91	20	373	98	0	491	93	12	199	0	304	1601
Apprch %	58.5	41.0	0.4	0.1		7.7	72.5	19.8	0.0		4.1	76.0	20.0	0.0		30.6	3.9	65.5	0.0		
Total %	26.1	18.3	0.2	0.1	44.7	0.4	4.1	1.1	0.0	5.7	1.2	23.3	6.1	0.0	30.7	5.8	0.7	12.4	0.0	19.0	

	Mallory St. Southbound					Segar St. Westbound					Mallory St. Northbound					I-64 WB Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	241	142	1	0	384	2	35	10	0	47	9	168	40	0	217	76	6	97	0	179	827
Percent	62.8	37.0	0.3	0.0		4.3	74.5	21.3	0.0		4.1	77.4	18.4	0.0		42.5	3.4	54.2	0.0		
12:00 Volume	67	38	0	0	105	0	8	2	0	10	2	44	13	0	59	22	0	25	0	47	221
Peak Factor																					0.936
High Int.	12:00 PM					12:15 PM					12:00 PM					11:45 AM					
Volume	67	38	0	0	105	2	12	3	0	17	2	44	13	0	59	29	3	23	0	55	
Peak Factor					0.914					0.691					0.919					0.814	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and I-64 WB_Segar St. SAT
Site Code : 00003004
Start Date : 11/8/2008
Page No : 1

Groups Printed- Heavy Trucks

	Mallory St. Southbound					Segar St. Westbound					Mallory St. Northbound					I-64 WB Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	1	0	0	1	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	3
Total	0	1	0	0	1	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	3
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:45 PM	4	0	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
Total	6	0	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	8
01:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	3
01:15 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Grand Total	7	2	0	0	9	0	2	1	0	3	0	1	2	0	3	0	0	2	0	2	17
Apprch %	77.8	22.2	0.0	0.0		0.0	66.7	33.3	0.0		0.0	33.3	66.7	0.0		0.0	0.0	100.0	0.0		
Total %	41.2	11.8	0.0	0.0	52.9	0.0	11.8	5.9	0.0	17.6	0.0	5.9	11.8	0.0	17.6	0.0	0.0	11.8	0.0	11.8	

	Mallory St. Southbound					Segar St. Westbound					Mallory St. Northbound					I-64 WB Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	12:30 PM																				
Volume	7	1	0	0	8	0	2	0	0	2	0	1	1	0	2	0	0	1	0	1	13
Percent	87.5	12.5	0.0	0.0		0.0	100.0	0.0	0.0		0.0	50.0	50.0	0.0		0.0	0.0	100.0	0.0		
12:45 Volume	4	0	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
Peak Factor																					0.650
High Int.	12:45 PM					01:00 PM					12:45 PM					01:15 PM					
Volume	4	0	0	0	4	0	2	0	0	2	0	1	0	0	1	0	0	1	0	1	
Peak Factor					0.500					0.250					0.500					0.250	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and I-64 WB_Segar St. SAT
Site Code : 00003004
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles - Heavy Trucks

	Mallory St. Southbound					Segar St. Westbound					Mallory St. Northbound					I-64 WB Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	57	39	0	0	96	0	6	0	0	6	3	44	10	0	57	19	0	19	0	38	197
11:45 AM	55	32	0	0	87	0	9	6	0	15	2	38	5	0	45	29	3	23	0	55	202
Total	112	71	0	0	183	0	15	6	0	21	5	82	15	0	102	48	3	42	0	93	399
12:00 PM	67	38	0	0	105	0	8	2	0	10	2	44	13	0	59	22	0	26	0	48	222
12:15 PM	62	34	1	0	97	2	12	3	0	17	2	42	13	0	57	6	3	30	0	39	210
12:30 PM	53	40	1	0	94	2	5	3	0	10	2	48	16	0	66	5	3	21	0	29	199
12:45 PM	53	33	1	0	87	1	3	1	0	5	2	55	12	0	69	3	0	28	0	31	192
Total	235	145	3	0	383	5	28	9	0	42	8	189	54	0	251	36	6	105	0	147	823
01:00 PM	39	33	0	1	73	2	15	1	0	18	4	46	14	0	64	4	1	24	0	29	184
01:15 PM	39	46	0	0	85	0	10	3	0	13	3	57	17	0	77	5	2	30	0	37	212
Grand Total	425	295	3	1	724	7	68	19	0	94	20	374	100	0	494	93	12	201	0	306	1618
Apprch %	58.7	40.7	0.4	0.1		7.4	72.3	20.2	0.0		4.0	75.7	20.2	0.0		30.4	3.9	65.7	0.0		
Total %	26.3	18.2	0.2	0.1	44.7	0.4	4.2	1.2	0.0	5.8	1.2	23.1	6.2	0.0	30.5	5.7	0.7	12.4	0.0	18.9	

	Mallory St. Southbound					Segar St. Westbound					Mallory St. Northbound					I-64 WB Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:45 AM																				
Volume	237	144	2	0	383	4	34	14	0	52	8	172	47	0	227	62	9	100	0	171	833
Percent	61.9	37.6	0.5	0.0		7.7	65.4	26.9	0.0		3.5	75.8	20.7	0.0		36.3	5.3	58.5	0.0		
12:00 Volume	67	38	0	0	105	0	8	2	0	10	2	44	13	0	59	22	0	26	0	48	222
Peak Factor																					0.938
High Int.	12:00 PM					12:15 PM					12:30 PM					11:45 AM					
Volume	67	38	0	0	105	2	12	3	0	17	2	48	16	0	66	29	3	23	0	55	
Peak Factor					0.912					0.765					0.860					0.777	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and Mellen SAT
Site Code : 00003003
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles

	Mallory St. Southbound					Mellen St. Westbound					Mallory St. Northbound					Mellen St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	4	61	10	2	77	8	2	10	1	21	6	47	1	1	55	1	1	3	0	5	158
11:45 AM	3	63	11	1	78	5	6	14	1	26	9	46	0	0	55	2	5	0	1	8	167
Total	7	124	21	3	155	13	8	24	2	47	15	93	1	1	110	3	6	3	1	13	325
12:00 PM	2	64	6	1	73	5	4	18	0	27	8	40	1	0	49	0	3	1	0	4	153
12:15 PM	0	68	7	0	75	4	5	20	1	30	11	57	1	1	70	0	0	2	3	5	180
12:30 PM	1	63	7	0	71	5	4	16	0	25	10	48	2	0	60	1	3	1	1	6	162
12:45 PM	2	54	9	0	65	7	2	11	0	20	19	57	0	1	77	2	3	0	0	5	167
Total	5	249	29	1	284	21	15	65	1	102	48	202	4	2	256	3	9	4	4	20	662
01:00 PM	2	44	5	0	51	5	1	16	2	24	20	44	0	0	64	0	3	0	0	3	142
01:15 PM	2	47	10	0	59	8	0	13	0	21	20	47	2	1	70	2	1	2	0	5	155
Grand Total	16	464	65	4	549	47	24	118	5	194	103	386	7	4	500	8	19	9	5	41	1284
Apprch %	2.9	84.5	11.8	0.7		24.2	12.4	60.8	2.6		20.6	77.2	1.4	0.8		19.5	46.3	22.0	12.2		
Total %	1.2	36.1	5.1	0.3	42.8	3.7	1.9	9.2	0.4	15.1	8.0	30.1	0.5	0.3	38.9	0.6	1.5	0.7	0.4	3.2	

	Mallory St. Southbound					Mellen St. Westbound					Mallory St. Northbound					Mellen St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:45 AM																				
Volume	6	258	31	2	297	19	19	68	2	108	38	191	4	1	234	3	11	4	5	23	662
Percent	2.0	86.9	10.4	0.7		17.6	17.6	63.0	1.9		16.2	81.6	1.7	0.4		13.0	47.8	17.4	21.7		
12:15 Volume	0	68	7	0	75	4	5	20	1	30	11	57	1	1	70	0	0	2	3	5	180
Peak Factor																					0.919
High Int.	11:45 AM					12:15 PM					12:15 PM					11:45 AM					
Volume	3	63	11	1	78	4	5	20	1	30	11	57	1	1	70	2	5	0	1	8	
Peak Factor					0.952					0.900					0.836					0.719	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and Mellen SAT
Site Code : 00003003
Start Date : 11/8/2008
Page No : 1

Groups Printed- Heavy Trucks

	Mallory St. Southbound					Mellen St. Westbound					Mallory St. Northbound					Mellen St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
12:00 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	1	1	0	0	2	7
01:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
01:15 PM	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	3
Grand Total	0	6	0	0	6	0	1	2	0	3	0	3	0	0	3	1	1	0	0	2	14
Apprch %	0.0	100.0	0.0	0.0		0.0	33.3	66.7	0.0		0.0	100.0	0.0	0.0		50.0	50.0	0.0	0.0		
Total %	0.0	42.9	0.0	0.0	42.9	0.0	7.1	14.3	0.0	21.4	0.0	21.4	0.0	0.0	21.4	7.1	7.1	0.0	0.0	14.3	

	Mallory St. Southbound					Mellen St. Westbound					Mallory St. Northbound					Mellen St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:45 AM																				
Volume	0	4	0	0	4	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	8
Percent	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
12:00 Volume	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Peak Factor																					0.500
High Int.	12:00 PM					11:45 AM					12:00 PM					12:30 PM					
Volume	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	
Peak Factor					0.500					0.250					0.250					0.250	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and Mellen SAT
Site Code : 00003003
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles - Heavy Trucks

	Mallory St. Southbound					Mellen St. Westbound					Mallory St. Northbound					Mellen St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	4	62	10	2	78	8	2	10	1	21	6	47	1	1	55	1	1	3	0	5	159
11:45 AM	3	64	11	1	79	5	7	14	1	27	9	46	0	0	55	2	5	0	1	8	169
Total	7	126	21	3	157	13	9	24	2	48	15	93	1	1	110	3	6	3	1	13	328
12:00 PM	2	66	6	1	75	5	4	18	0	27	8	42	1	0	51	0	3	1	0	4	157
12:15 PM	0	68	7	0	75	4	5	20	1	30	11	57	1	1	70	0	0	2	3	5	180
12:30 PM	1	64	7	0	72	5	4	16	0	25	10	48	2	0	60	1	4	1	1	7	164
12:45 PM	2	54	9	0	65	7	2	11	0	20	19	57	0	1	77	3	3	0	0	6	168
Total	5	252	29	1	287	21	15	65	1	102	48	204	4	2	258	4	10	4	4	22	669
01:00 PM	2	44	5	0	51	5	1	17	2	25	20	44	0	0	64	0	3	0	0	3	143
01:15 PM	2	48	10	0	60	8	0	14	0	22	20	48	2	1	71	2	1	2	0	5	158
Grand Total	16	470	65	4	555	47	25	120	5	197	103	389	7	4	503	9	20	9	5	43	1298
Apprch %	2.9	84.7	11.7	0.7		23.9	12.7	60.9	2.5		20.5	77.3	1.4	0.8		20.9	46.5	20.9	11.6		
Total %	1.2	36.2	5.0	0.3	42.8	3.6	1.9	9.2	0.4	15.2	7.9	30.0	0.5	0.3	38.8	0.7	1.5	0.7	0.4	3.3	

	Mallory St. Southbound					Mellen St. Westbound					Mallory St. Northbound					Mellen St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:45 AM																				
Volume	6	262	31	2	301	19	20	68	2	109	38	193	4	1	236	3	12	4	5	24	670
Percent	2.0	87.0	10.3	0.7		17.4	18.3	62.4	1.8		16.1	81.8	1.7	0.4		12.5	50.0	16.7	20.8		
12:15 Volume	0	68	7	0	75	4	5	20	1	30	11	57	1	1	70	0	0	2	3	5	180
Peak Factor																					0.931
High Int.	11:45 AM					12:15 PM					12:15 PM					11:45 AM					
Volume	3	64	11	1	79	4	5	20	1	30	11	57	1	1	70	2	5	0	1	8	
Peak Factor					0.953					0.908					0.843					0.750	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and County SAT
Site Code : 00003005
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles

	Mallory St. Southbound					E. County St. Westbound					Mallory St. Northbound					W. County St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	4	77	0	3	84	1	6	0	2	9	6	48	3	1	58	5	3	9	0	17	168
11:45 AM	2	71	2	1	76	2	4	0	4	10	2	37	5	2	46	7	5	5	2	19	151
Total	6	148	2	4	160	3	10	0	6	19	8	85	8	3	104	12	8	14	2	36	319
12:00 PM	7	69	3	2	81	3	3	2	0	8	2	42	5	1	50	4	4	7	2	17	156
12:15 PM	6	63	2	1	72	2	1	1	2	6	7	49	9	3	68	7	3	10	0	20	166
12:30 PM	5	59	3	3	70	0	4	0	2	6	3	48	4	0	55	6	7	7	1	21	152
12:45 PM	12	43	4	3	62	3	2	1	1	7	3	53	3	4	63	9	4	7	3	23	155
Total	30	234	12	9	285	8	10	4	5	27	15	192	21	8	236	26	18	31	6	81	629
01:00 PM	6	52	4	0	62	1	3	1	2	7	0	44	6	2	52	3	6	9	1	19	140
01:15 PM	10	55	1	2	68	1	5	1	2	9	7	51	0	5	63	4	2	11	0	17	157
Grand Total	52	489	19	15	575	13	28	6	15	62	30	372	35	18	455	45	34	65	9	153	1245
Apprch %	9.0	85.0	3.3	2.6		21.0	45.2	9.7	24.2		6.6	81.8	7.7	4.0		29.4	22.2	42.5	5.9		
Total %	4.2	39.3	1.5	1.2	46.2	1.0	2.2	0.5	1.2	5.0	2.4	29.9	2.8	1.4	36.5	3.6	2.7	5.2	0.7	12.3	

	Mallory St. Southbound					E. County St. Westbound					Mallory St. Northbound					W. County St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	19	280	7	7	313	8	14	3	8	33	17	176	22	7	222	23	15	31	4	73	641
Percent	6.1	89.5	2.2	2.2		24.2	42.4	9.1	24.2		7.7	79.3	9.9	3.2		31.5	20.5	42.5	5.5		
11:30 Volume	4	77	0	3	84	1	6	0	2	9	6	48	3	1	58	5	3	9	0	17	168
Peak Factor																					0.954
High Int.	11:30 AM					11:45 AM					12:15 PM					12:15 PM					
Volume	4	77	0	3	84	2	4	0	4	10	7	49	9	3	68	7	3	10	0	20	
Peak Factor					0.932					0.825					0.816					0.913	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and County SAT
Site Code : 00003005
Start Date : 11/8/2008
Page No : 1

Groups Printed- Heavy Trucks

	Mallory St. Southbound					E. County St. Westbound					Mallory St. Northbound					W. County St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
11:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	5
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
12:15 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3
12:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
12:45 PM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	2	4	0	0	6	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	10
01:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:15 PM	2	1	0	0	3	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	5
Grand Total	6	7	0	0	13	0	1	0	0	1	0	3	0	0	3	1	0	3	0	4	21
Apprch %	46.2	53.8	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		25.0	0.0	75.0	0.0		
Total %	28.6	33.3	0.0	0.0	61.9	0.0	4.8	0.0	0.0	4.8	0.0	14.3	0.0	0.0	14.3	4.8	0.0	14.3	0.0	19.0	

	Mallory St. Southbound					E. County St. Westbound					Mallory St. Northbound					W. County St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	12:30 PM																				
Volume	4	4	0	0	8	0	1	0	0	1	0	1	0	0	1	0	0	1	0	1	11
Percent	50.0	50.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
01:15 Volume	2	1	0	0	3	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	5
Peak Factor																					0.550
High Int.	12:45 PM					01:15 PM					01:15 PM					12:30 PM					
Volume	1	2	0	0	3	0	1	0	0	1	0	1	0	0	1	0	0	1	0	1	
Peak Factor					0.667					0.250					0.250					0.250	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and County SAT
Site Code : 00003005
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles - Heavy Trucks

	Mallory St. Southbound					E. County St. Westbound					Mallory St. Northbound					W. County St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	5	78	0	3	86	1	6	0	2	9	6	48	3	1	58	5	3	11	0	19	172
11:45 AM	2	72	2	1	77	2	4	0	4	10	2	37	5	2	46	7	5	5	2	19	152
Total	7	150	2	4	163	3	10	0	6	19	8	85	8	3	104	12	8	16	2	38	324
12:00 PM	7	69	3	2	81	3	3	2	0	8	2	44	5	1	52	4	4	7	2	17	158
12:15 PM	7	64	2	1	74	2	1	1	2	6	7	49	9	3	68	8	3	10	0	21	169
12:30 PM	5	60	3	3	71	0	4	0	2	6	3	48	4	0	55	6	7	8	1	22	154
12:45 PM	13	45	4	3	65	3	2	1	1	7	3	53	3	4	63	9	4	7	3	23	158
Total	32	238	12	9	291	8	10	4	5	27	15	194	21	8	238	27	18	32	6	83	639
01:00 PM	7	52	4	0	63	1	3	1	2	7	0	44	6	2	52	3	6	9	1	19	141
01:15 PM	12	56	1	2	71	1	6	1	2	10	7	52	0	5	64	4	2	11	0	17	162
Grand Total	58	496	19	15	588	13	29	6	15	63	30	375	35	18	458	46	34	68	9	157	1266
Apprch %	9.9	84.4	3.2	2.6		20.6	46.0	9.5	23.8		6.6	81.9	7.6	3.9		29.3	21.7	43.3	5.7		
Total %	4.6	39.2	1.5	1.2	46.4	1.0	2.3	0.5	1.2	5.0	2.4	29.6	2.8	1.4	36.2	3.6	2.7	5.4	0.7	12.4	

	Mallory St. Southbound					E. County St. Westbound					Mallory St. Northbound					W. County St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	21	283	7	7	318	8	14	3	8	33	17	178	22	7	224	24	15	33	4	76	651
Percent	6.6	89.0	2.2	2.2		24.2	42.4	9.1	24.2		7.6	79.5	9.8	3.1		31.6	19.7	43.4	5.3		
11:30 Volume	5	78	0	3	86	1	6	0	2	9	6	48	3	1	58	5	3	11	0	19	172
Peak Factor																					0.946
High Int.	11:30 AM					11:45 AM					12:15 PM					12:15 PM					
Volume	5	78	0	3	86	2	4	0	4	10	7	49	9	3	68	8	3	10	0	21	
Peak Factor					0.924					0.825					0.824					0.905	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and Mercury SAT
Site Code : 00003010
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles

	Mallory St. Southbound					Mercury Blvd. Westbound					Mallory St. Northbound					Mercury Blvd. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	20	65	8	0	93	5	25	6	1	37	5	47	13	0	65	18	11	6	1	36	231
11:45 AM	9	69	8	1	87	9	20	7	0	36	4	26	10	1	41	11	15	14	1	41	205
Total	29	134	16	1	180	14	45	13	1	73	9	73	23	1	106	29	26	20	2	77	436
12:00 PM	9	56	3	0	68	5	23	8	1	37	6	30	15	1	52	17	22	11	1	51	208
12:15 PM	10	45	6	0	61	5	23	6	0	34	5	46	12	0	63	16	11	9	0	36	194
12:30 PM	5	47	7	0	59	4	23	3	0	30	2	38	18	0	58	14	13	14	1	42	189
12:45 PM	12	38	5	1	56	3	29	6	2	40	3	38	11	0	52	14	11	15	3	43	191
Total	36	186	21	1	244	17	98	23	3	141	16	152	56	1	225	61	57	49	5	172	782
01:00 PM	11	44	5	0	60	5	18	4	0	27	0	46	10	0	56	18	16	12	0	46	189
01:15 PM	9	44	6	0	59	5	14	7	0	26	5	45	11	0	61	18	13	13	0	44	190
Grand Total	85	408	48	2	543	41	175	47	4	267	30	316	100	2	448	126	112	94	7	339	1597
Apprch %	15.7	75.1	8.8	0.4		15.4	65.5	17.6	1.5		6.7	70.5	22.3	0.4		37.2	33.0	27.7	2.1		
Total %	5.3	25.5	3.0	0.1	34.0	2.6	11.0	2.9	0.3	16.7	1.9	19.8	6.3	0.1	28.1	7.9	7.0	5.9	0.4	21.2	

	Mallory St. Southbound					Mercury Blvd. Westbound					Mallory St. Northbound					Mercury Blvd. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	48	235	25	1	309	24	91	27	2	144	20	149	50	2	221	62	59	40	3	164	838
Percent	15.5	76.1	8.1	0.3		16.7	63.2	18.8	1.4		9.0	67.4	22.6	0.9		37.8	36.0	24.4	1.8		
11:30 Volume	20	65	8	0	93	5	25	6	1	37	5	47	13	0	65	18	11	6	1	36	231
Peak Factor																					0.907
High Int.	11:30 AM					11:30 AM					11:30 AM					12:00 PM					
Volume	20	65	8	0	93	5	25	6	1	37	5	47	13	0	65	17	22	11	1	51	
Peak Factor					0.831					0.973					0.850					0.804	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and Mercury SAT
Site Code : 00003010
Start Date : 11/8/2008
Page No : 1

Groups Printed- Heavy Trucks

	Mallory St. Southbound					Mercury Blvd. Westbound					Mallory St. Northbound					Mercury Blvd. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	5
11:45 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total	0	4	0	0	4	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	8
12:00 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2
12:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	4
12:45 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
Total	0	4	0	0	4	1	1	0	0	2	0	3	0	0	3	1	0	0	0	1	10
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
01:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	10	0	0	10	1	2	0	0	3	0	6	0	0	6	1	0	1	0	2	21
Apprch %	0.0	100.0	0.0	0.0		33.3	66.7	0.0	0.0		0.0	100.0	0.0	0.0		50.0	0.0	50.0	0.0		
Total %	0.0	47.6	0.0	0.0	47.6	4.8	9.5	0.0	0.0	14.3	0.0	28.6	0.0	0.0	28.6	4.8	0.0	4.8	0.0	9.5	

	Mallory St. Southbound					Mercury Blvd. Westbound					Mallory St. Northbound					Mercury Blvd. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	0	6	0	0	6	0	2	0	0	2	0	4	0	0	4	0	0	0	0	0	12
Percent	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
11:30 Volume	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	5
Peak Factor																					0.600
High Int.	11:30 AM					11:30 AM					11:30 AM					11:15:00 AM					
Volume	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2						
Peak Factor					0.750					0.500					0.500						

Peggy Malone and Associates
904-992-8072

File Name : Mallory and Mercury SAT
Site Code : 00003010
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles - Heavy Trucks

	Mallory St. Southbound					Mercury Blvd. Westbound					Mallory St. Northbound					Mercury Blvd. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	20	67	8	0	95	5	26	6	1	38	5	49	13	0	67	18	11	6	1	36	236
11:45 AM	9	71	8	1	89	9	20	7	0	36	4	27	10	1	42	11	15	14	1	41	208
Total	29	138	16	1	184	14	46	13	1	74	9	76	23	1	109	29	26	20	2	77	444
12:00 PM	9	56	3	0	68	5	24	8	1	38	6	31	15	1	53	17	22	11	1	51	210
12:15 PM	10	47	6	0	63	5	23	6	0	34	5	46	12	0	63	16	11	9	0	36	196
12:30 PM	5	49	7	0	61	4	23	3	0	30	2	39	18	0	59	15	13	14	1	43	193
12:45 PM	12	38	5	1	56	4	29	6	2	41	3	39	11	0	53	14	11	15	3	43	193
Total	36	190	21	1	248	18	99	23	3	143	16	155	56	1	228	62	57	49	5	173	792
01:00 PM	11	44	5	0	60	5	18	4	0	27	0	46	10	0	56	18	16	13	0	47	190
01:15 PM	9	46	6	0	61	5	14	7	0	26	5	45	11	0	61	18	13	13	0	44	192
Grand Total	85	418	48	2	553	42	177	47	4	270	30	322	100	2	454	127	112	95	7	341	1618
Apprch %	15.4	75.6	8.7	0.4		15.6	65.6	17.4	1.5		6.6	70.9	22.0	0.4		37.2	32.8	27.9	2.1		
Total %	5.3	25.8	3.0	0.1	34.2	2.6	10.9	2.9	0.2	16.7	1.9	19.9	6.2	0.1	28.1	7.8	6.9	5.9	0.4	21.1	

	Mallory St. Southbound					Mercury Blvd. Westbound					Mallory St. Northbound					Mercury Blvd. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	48	241	25	1	315	24	93	27	2	146	20	153	50	2	225	62	59	40	3	164	850
Percent	15.2	76.5	7.9	0.3		16.4	63.7	18.5	1.4		8.9	68.0	22.2	0.9		37.8	36.0	24.4	1.8		
11:30 Volume	20	67	8	0	95	5	26	6	1	38	5	49	13	0	67	18	11	6	1	36	236
Peak Factor																					0.900
High Int.	11:30 AM					11:30 AM					11:30 AM					12:00 PM					
Volume	20	67	8	0	95	5	26	6	1	38	5	49	13	0	67	17	22	11	1	51	
Peak Factor					0.829					0.961					0.840					0.804	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and Atlantic SAT
Site Code : 00003008
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles

	Mallory St. Southbound					Atlantic Ave. Westbound					Mallory St. Northbound					Atlantic Ave. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	2	26	2	0	30	1	2	5	0	8	3	26	6	0	35	10	4	1	0	15	88
11:45 AM	1	25	0	0	26	0	3	4	0	7	4	25	6	0	35	11	6	2	0	19	87
Total	3	51	2	0	56	1	5	9	0	15	7	51	12	0	70	21	10	3	0	34	175
12:00 PM	0	31	0	1	32	0	4	6	0	10	4	27	3	0	34	10	7	3	0	20	96
12:15 PM	1	22	0	0	23	1	1	5	0	7	2	27	1	0	30	5	3	2	0	10	70
12:30 PM	0	18	2	0	20	1	2	5	0	8	7	30	2	0	39	6	1	1	1	9	76
12:45 PM	1	22	0	0	23	0	2	7	0	9	1	19	1	0	21	7	2	1	0	10	63
Total	2	93	2	1	98	2	9	23	0	34	14	103	7	0	124	28	13	7	1	49	305
01:00 PM	0	21	0	0	21	0	5	1	0	6	4	29	2	0	35	2	4	2	0	8	70
01:15 PM	0	21	2	0	23	2	2	4	0	8	2	33	3	0	38	3	4	2	1	10	79
Grand Total	5	186	6	1	198	5	21	37	0	63	27	216	24	0	267	54	31	14	2	101	629
Apprch %	2.5	93.9	3.0	0.5		7.9	33.3	58.7	0.0		10.1	80.9	9.0	0.0		53.5	30.7	13.9	2.0		
Total %	0.8	29.6	1.0	0.2	31.5	0.8	3.3	5.9	0.0	10.0	4.3	34.3	3.8	0.0	42.4	8.6	4.9	2.2	0.3	16.1	

	Mallory St. Southbound					Atlantic Ave. Westbound					Mallory St. Northbound					Atlantic Ave. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	4	104	2	1	111	2	10	20	0	32	13	105	16	0	134	36	20	8	0	64	341
Percent	3.6	93.7	1.8	0.9		6.3	31.3	62.5	0.0		9.7	78.4	11.9	0.0		56.3	31.3	12.5	0.0		
12:00 Volume	0	31	0	1	32	0	4	6	0	10	4	27	3	0	34	10	7	3	0	20	96
Peak Factor																					0.888
High Int.	12:00 PM					12:00 PM					11:30 AM					12:00 PM					
Volume	0	31	0	1	32	0	4	6	0	10	3	26	6	0	35	10	7	3	0	20	
Peak Factor					0.867					0.800					0.957					0.800	

Peggy Malone and Associates
904-992-8072

File Name : Mallory and Atlantic SAT
Site Code : 00003008
Start Date : 11/8/2008
Page No : 1

Groups Printed- Heavy Trucks

	Mallory St. Southbound					Atlantic Ave. Westbound					Mallory St. Northbound					Atlantic Ave. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
11:45 AM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
Total	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
12:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	5
01:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	0	4	0	0	4	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	14
Apprch %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	90.0	10.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	0.0	64.3	7.1	0.0	71.4	0.0	0.0	0.0	0.0	0.0	

	Mallory St. Southbound					Atlantic Ave. Westbound					Mallory St. Northbound					Atlantic Ave. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
Percent	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
11:45 Volume	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
Peak Factor																					0.563
High Int.	11:45 AM					11:15:00 AM					11:45 AM					11:15:00 AM					
Volume	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3						
Peak Factor					0.750										0.500						

Peggy Malone and Associates
904-992-8072

File Name : Mallory and Atlantic SAT
Site Code : 00003008
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles - Heavy Trucks

	Mallory St. Southbound					Atlantic Ave. Westbound					Mallory St. Northbound					Atlantic Ave. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	2	26	2	0	30	1	2	5	0	8	3	28	6	0	37	10	4	1	0	15	90
11:45 AM	1	26	0	0	27	0	3	4	0	7	4	28	6	0	38	11	6	2	0	19	91
Total	3	52	2	0	57	1	5	9	0	15	7	56	12	0	75	21	10	3	0	34	181
12:00 PM	0	32	0	1	33	0	4	6	0	10	4	27	3	0	34	10	7	3	0	20	97
12:15 PM	1	23	0	0	24	1	1	5	0	7	2	28	1	0	31	5	3	2	0	10	72
12:30 PM	0	18	2	0	20	1	2	5	0	8	7	30	3	0	40	6	1	1	1	9	77
12:45 PM	1	22	0	0	23	0	2	7	0	9	1	20	1	0	22	7	2	1	0	10	64
Total	2	95	2	1	100	2	9	23	0	34	14	105	8	0	127	28	13	7	1	49	310
01:00 PM	0	22	0	0	22	0	5	1	0	6	4	30	2	0	36	2	4	2	0	8	72
01:15 PM	0	21	2	0	23	2	2	4	0	8	2	34	3	0	39	3	4	2	1	10	80
Grand Total	5	190	6	1	202	5	21	37	0	63	27	225	25	0	277	54	31	14	2	101	643
Apprch %	2.5	94.1	3.0	0.5		7.9	33.3	58.7	0.0		9.7	81.2	9.0	0.0		53.5	30.7	13.9	2.0		
Total %	0.8	29.5	0.9	0.2	31.4	0.8	3.3	5.8	0.0	9.8	4.2	35.0	3.9	0.0	43.1	8.4	4.8	2.2	0.3	15.7	

	Mallory St. Southbound					Atlantic Ave. Westbound					Mallory St. Northbound					Atlantic Ave. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	4	107	2	1	114	2	10	20	0	32	13	111	16	0	140	36	20	8	0	64	350
Percent	3.5	93.9	1.8	0.9		6.3	31.3	62.5	0.0		9.3	79.3	11.4	0.0		56.3	31.3	12.5	0.0		
12:00 Volume	0	32	0	1	33	0	4	6	0	10	4	27	3	0	34	10	7	3	0	20	97
Peak Factor																					0.902
High Int.	12:00 PM					12:00 PM					11:45 AM					12:00 PM					
Volume	0	32	0	1	33	0	4	6	0	10	4	28	6	0	38	10	7	3	0	20	
Peak Factor					0.864					0.800					0.921					0.800	

Peggy Malone and Associates
904-992-8072

File Name : Woodland and County SAT
Site Code : 00002960
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	150	3	0	153	3	0	24	0	27	25	111	0	0	136	0	0	0	0	0	316
11:45 AM	0	134	4	0	138	2	0	17	0	19	23	112	0	0	135	0	0	0	0	0	292
Total	0	284	7	0	291	5	0	41	0	46	48	223	0	0	271	0	0	0	0	0	608
12:00 PM	0	121	1	0	122	5	0	14	0	19	28	118	0	0	146	0	0	0	0	0	287
12:15 PM	0	122	6	0	128	5	0	24	0	29	33	115	0	0	148	0	0	0	0	0	305
12:30 PM	0	129	4	0	133	7	0	18	0	25	43	103	0	0	146	0	0	0	0	0	304
12:45 PM	0	123	5	0	128	3	0	28	0	31	32	105	0	0	137	0	0	0	0	0	296
Total	0	495	16	0	511	20	0	84	0	104	136	441	0	0	577	0	0	0	0	0	1192
01:00 PM	0	121	3	0	124	3	0	23	0	26	22	104	0	0	126	0	0	0	0	0	276
01:15 PM	0	114	6	0	120	2	0	19	0	21	24	77	0	0	101	0	0	0	0	0	242
Grand Total	0	1014	32	0	1046	30	0	167	0	197	230	845	0	0	1075	0	0	0	0	0	2318
Apprch %	0.0	96.9	3.1	0.0		15.2	0.0	84.8	0.0		21.4	78.6	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	43.7	1.4	0.0	45.1	1.3	0.0	7.2	0.0	8.5	9.9	36.5	0.0	0.0	46.4	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	0	527	14	0	541	15	0	79	0	94	109	456	0	0	565	0	0	0	0	0	1200
Percent	0.0	97.4	2.6	0.0		16.0	0.0	84.0	0.0		19.3	80.7	0.0	0.0		0.0	0.0	0.0	0.0		
11:30 Volume	0	150	3	0	153	3	0	24	0	27	25	111	0	0	136	0	0	0	0	0	316
Peak Factor																					0.949
High Int.	11:30 AM					12:15 PM					12:15 PM					11:15:00 AM					
Volume	0	150	3	0	153	5	0	24	0	29	33	115	0	0	148						
Peak Factor					0.884					0.810					0.954						

Peggy Malone and Associates
904-992-8072

File Name : Woodland and County SAT
Site Code : 00002960
Start Date : 11/8/2008
Page No : 1

Groups Printed- Heavy Trucks

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
12:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:15 PM	0	0	0	0	0	1	0	1	0	2	1	1	0	0	2	0	0	0	0	0	4
12:30 PM	0	0	1	0	1	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	3
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	2	1	0	3	1	0	2	0	3	2	2	0	0	4	0	0	0	0	0	10
01:00 PM	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	3
01:15 PM	0	0	0	0	0	1	0	1	0	2	1	0	0	0	1	0	0	0	0	0	3
Grand Total	0	3	3	0	6	2	0	4	0	6	3	4	0	0	7	0	0	0	0	0	19
Apprch %	0.0	50.0	50.0	0.0		33.3	0.0	66.7	0.0		42.9	57.1	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	15.8	15.8	0.0	31.6	10.5	0.0	21.1	0.0	31.6	15.8	21.1	0.0	0.0	36.8	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	12:15 PM																				
Volume	0	1	1	0	2	1	0	3	0	4	2	3	0	0	5	0	0	0	0	0	11
Percent	0.0	50.0	50.0	0.0		25.0	0.0	75.0	0.0		40.0	60.0	0.0	0.0		0.0	0.0	0.0	0.0		
12:15 Volume	0	0	0	0	0	1	0	1	0	2	1	1	0	0	2	0	0	0	0	0	4
Peak Factor																					0.688
High Int.	12:30 PM					12:15 PM					12:15 PM					11:15:00 AM					
Volume	0	0	1	0	1	1	0	1	0	2	1	1	0	0	2						
Peak Factor					0.500					0.500					0.625						

Peggy Malone and Associates
904-992-8072

File Name : Woodland and County SAT
Site Code : 00002960
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles - Heavy Trucks

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	150	5	0	155	3	0	24	0	27	25	112	0	0	137	0	0	0	0	0	319
11:45 AM	0	134	4	0	138	2	0	17	0	19	23	112	0	0	135	0	0	0	0	0	292
Total	0	284	9	0	293	5	0	41	0	46	48	224	0	0	272	0	0	0	0	0	611
12:00 PM	0	123	1	0	124	5	0	14	0	19	28	118	0	0	146	0	0	0	0	0	289
12:15 PM	0	122	6	0	128	6	0	25	0	31	34	116	0	0	150	0	0	0	0	0	309
12:30 PM	0	129	5	0	134	7	0	19	0	26	44	103	0	0	147	0	0	0	0	0	307
12:45 PM	0	123	5	0	128	3	0	28	0	31	32	106	0	0	138	0	0	0	0	0	297
Total	0	497	17	0	514	21	0	86	0	107	138	443	0	0	581	0	0	0	0	0	1202
01:00 PM	0	122	3	0	125	3	0	24	0	27	22	105	0	0	127	0	0	0	0	0	279
01:15 PM	0	114	6	0	120	3	0	20	0	23	25	77	0	0	102	0	0	0	0	0	245
Grand Total	0	1017	35	0	1052	32	0	171	0	203	233	849	0	0	1082	0	0	0	0	0	2337
Apprch %	0.0	96.7	3.3	0.0		15.8	0.0	84.2	0.0		21.5	78.5	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	43.5	1.5	0.0	45.0	1.4	0.0	7.3	0.0	8.7	10.0	36.3	0.0	0.0	46.3	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd. Southbound					County St. Westbound					Woodland Rd. Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	0	529	16	0	545	16	0	80	0	96	110	458	0	0	568	0	0	0	0	0	1209
Percent	0.0	97.1	2.9	0.0		16.7	0.0	83.3	0.0		19.4	80.6	0.0	0.0		0.0	0.0	0.0	0.0		
11:30 Volume	0	150	5	0	155	3	0	24	0	27	25	112	0	0	137	0	0	0	0	0	319
Peak Factor																					0.947
High Int.	11:30 AM					12:15 PM					12:15 PM					11:15:00 AM					
Volume	0	150	5	0	155	6	0	25	0	31	34	116	0	0	150						
Peak Factor					0.879					0.774					0.947						

Peggy Malone and Associates
904-992-8072

File Name : Woodland Rd & I-64 WB Ramps SAT
Site Code : 00003389
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	78	113	0	0	191	28	0	46	0	74	0	88	38	1	127	0	0	0	0	0	392
11:45 AM	64	72	0	0	136	34	0	32	0	66	0	96	54	0	150	0	0	0	0	0	352
Total	142	185	0	0	327	62	0	78	0	140	0	184	92	1	277	0	0	0	0	0	744
12:00 PM	61	76	0	0	137	37	1	47	0	85	0	113	41	0	154	0	0	0	0	0	376
12:15 PM	68	75	0	0	143	32	0	44	0	76	0	104	38	0	142	0	0	0	0	0	361
12:30 PM	62	85	0	0	147	28	11	33	0	72	0	105	33	0	138	0	0	0	0	0	357
12:45 PM	48	86	0	0	134	31	0	30	0	61	0	105	28	0	133	0	0	0	0	0	328
Total	239	322	0	0	561	128	12	154	0	294	0	427	140	0	567	0	0	0	0	0	1422
01:00 PM	66	83	0	0	149	28	1	35	0	64	0	109	52	0	161	0	0	0	0	0	374
01:15 PM	69	64	0	0	133	29	1	13	0	43	0	86	29	0	115	0	0	0	0	0	291
Grand Total	516	654	0	0	1170	247	14	280	0	541	0	806	313	1	1120	0	0	0	0	0	2831
Apprch %	44.1	55.9	0.0	0.0		45.7	2.6	51.8	0.0		0.0	72.0	27.9	0.1		0.0	0.0	0.0	0.0		
Total %	18.2	23.1	0.0	0.0	41.3	8.7	0.5	9.9	0.0	19.1	0.0	28.5	11.1	0.0	39.6	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	271	336	0	0	607	131	1	169	0	301	0	401	171	1	573	0	0	0	0	0	1481
Percent	44.6	55.4	0.0	0.0		43.5	0.3	56.1	0.0		0.0	70.0	29.8	0.2		0.0	0.0	0.0	0.0		
11:30 Volume	78	113	0	0	191	28	0	46	0	74	0	88	38	1	127	0	0	0	0	0	392
Peak Factor																					0.945
High Int.	11:30 AM					12:00 PM					12:00 PM					11:15:00 AM					
Volume	78	113	0	0	191	37	1	47	0	85	0	113	41	0	154						
Peak Factor					0.795					0.885					0.930						

Peggy Malone and Associates
904-992-8072

File Name : Woodland Rd & I-64 WB Ramps SAT
Site Code : 00003389
Start Date : 11/8/2008
Page No : 1

Groups Printed- Trucks

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	3
Total	1	0	0	0	1	0	0	1	0	1	0	1	2	0	3	0	0	0	0	0	5
12:00 PM	0	0	0	0	0	0	1	1	0	2	0	2	1	0	3	0	0	0	0	0	5
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
12:30 PM	1	2	0	0	3	0	0	1	0	1	0	1	1	0	2	0	0	0	0	0	6
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Total	1	2	0	0	3	0	1	2	0	3	0	3	5	0	8	0	0	0	0	0	14
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	1	1	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Grand Total	3	3	0	0	6	1	1	3	0	5	0	4	7	0	11	0	0	0	0	0	22
Apprch %	50.0	50.0	0.0	0.0		20.0	20.0	60.0	0.0		0.0	36.4	63.6	0.0		0.0	0.0	0.0	0.0		
Total %	13.6	13.6	0.0	0.0	27.3	4.5	4.5	13.6	0.0	22.7	0.0	18.2	31.8	0.0	50.0	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:45 AM																				
Volume	1	2	0	0	3	0	1	3	0	4	0	3	6	0	9	0	0	0	0	0	16
Percent	33.3	66.7	0.0	0.0		0.0	25.0	75.0	0.0		0.0	33.3	66.7	0.0		0.0	0.0	0.0	0.0		
12:30 Volume	1	2	0	0	3	0	0	1	0	1	0	1	1	0	2	0	0	0	0	0	6
Peak Factor																					0.667
High Int.	12:30 PM					12:00 PM					12:00 PM					11:15:00 AM					
Volume	1	2	0	0	3	0	1	1	0	2	0	2	1	0	3						
Peak Factor					0.250					0.500					0.750						

Peggy Malone and Associates
904-992-8072

File Name : Woodland Rd & I-64 WB Ramps SAT
Site Code : 00003389
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles - Trucks

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	79	113	0	0	192	28	0	46	0	74	0	89	38	1	128	0	0	0	0	0	394
11:45 AM	64	72	0	0	136	34	0	33	0	67	0	96	56	0	152	0	0	0	0	0	355
Total	143	185	0	0	328	62	0	79	0	141	0	185	94	1	280	0	0	0	0	0	749
12:00 PM	61	76	0	0	137	37	2	48	0	87	0	115	42	0	157	0	0	0	0	0	381
12:15 PM	68	75	0	0	143	32	0	44	0	76	0	104	40	0	144	0	0	0	0	0	363
12:30 PM	63	87	0	0	150	28	11	34	0	73	0	106	34	0	140	0	0	0	0	0	363
12:45 PM	48	86	0	0	134	31	0	30	0	61	0	105	29	0	134	0	0	0	0	0	329
Total	240	324	0	0	564	128	13	156	0	297	0	430	145	0	575	0	0	0	0	0	1436
01:00 PM	66	83	0	0	149	28	1	35	0	64	0	109	52	0	161	0	0	0	0	0	374
01:15 PM	70	65	0	0	135	30	1	13	0	44	0	86	29	0	115	0	0	0	0	0	294
Grand Total	519	657	0	0	1176	248	15	283	0	546	0	810	320	1	1131	0	0	0	0	0	2853
Apprch %	44.1	55.9	0.0	0.0		45.4	2.7	51.8	0.0		0.0	71.6	28.3	0.1		0.0	0.0	0.0	0.0		
Total %	18.2	23.0	0.0	0.0	41.2	8.7	0.5	9.9	0.0	19.1	0.0	28.4	11.2	0.0	39.6	0.0	0.0	0.0	0.0	0.0	

	Woodland Rd Southbound					I-64 WB Off Ramp Westbound					Woodland Rd Northbound					I-64 WB On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	272	336	0	0	608	131	2	171	0	304	0	404	176	1	581	0	0	0	0	0	1493
Percent	44.7	55.3	0.0	0.0		43.1	0.7	56.3	0.0		0.0	69.5	30.3	0.2		0.0	0.0	0.0	0.0		
11:30 Volume	79	113	0	0	192	28	0	46	0	74	0	89	38	1	128	0	0	0	0	0	394
Peak Factor																					0.947
High Int.	11:30 AM					12:00 PM					12:00 PM					11:15:00 AM					
Volume	79	113	0	0	192	37	2	48	0	87	0	115	42	0	157						
Peak Factor					0.792					0.874					0.925						

Peggy Malone and Associates
904-992-8072

File Name : Settler Landing and Tyler SAT
Site Code : 00003001
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles

	Settler Landing Southbound					Tyler St Westbound					Settler Landing Northbound					I-64 EB Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	76	19	0	95	28	0	2	0	30	16	93	0	0	109	28	31	54	0	113	347
11:45 AM	0	62	16	0	78	39	0	18	0	57	10	88	0	0	98	16	26	54	0	96	329
Total	0	138	35	0	173	67	0	20	0	87	26	181	0	0	207	44	57	108	0	209	676
12:00 PM	0	79	17	0	96	25	0	4	0	29	12	102	0	0	114	11	26	69	0	106	345
12:15 PM	0	59	19	0	78	39	0	11	0	50	14	99	0	0	113	24	26	81	0	131	372
12:30 PM	0	89	16	0	105	24	0	5	0	29	11	88	0	0	99	11	34	65	0	110	343
12:45 PM	0	60	19	0	79	26	0	10	0	36	12	78	0	0	90	17	38	53	0	108	313
Total	0	287	71	0	358	114	0	30	0	144	49	367	0	0	416	63	124	268	0	455	1373
01:00 PM	0	56	24	0	80	24	0	6	0	30	17	116	0	0	133	19	20	55	0	94	337
01:15 PM	0	44	15	0	59	27	0	5	0	32	11	113	0	0	124	12	24	58	0	94	309
Grand Total	0	525	145	0	670	232	0	61	0	293	103	777	0	0	880	138	225	489	0	852	2695
Apprch %	0.0	78.4	21.6	0.0		79.2	0.0	20.8	0.0		11.7	88.3	0.0	0.0		16.2	26.4	57.4	0.0		
Total %	0.0	19.5	5.4	0.0	24.9	8.6	0.0	2.3	0.0	10.9	3.8	28.8	0.0	0.0	32.7	5.1	8.3	18.1	0.0	31.6	

	Settler Landing Southbound					Tyler St Westbound					Settler Landing Northbound					I-64 EB Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	0	276	71	0	347	131	0	35	0	166	52	382	0	0	434	79	109	258	0	446	1393
Percent	0.0	79.5	20.5	0.0		78.9	0.0	21.1	0.0		12.0	88.0	0.0	0.0		17.7	24.4	57.8	0.0		
12:15 Volume	0	59	19	0	78	39	0	11	0	50	14	99	0	0	113	24	26	81	0	131	372
Peak Factor																					0.936
High Int.	12:00 PM					11:45 AM					12:00 PM					12:15 PM					
Volume	0	79	17	0	96	39	0	18	0	57	12	102	0	0	114	24	26	81	0	131	
Peak Factor					0.904					0.728					0.952					0.851	

Peggy Malone and Associates
904-992-8072

File Name : Settler Landing and Tyler SAT
Site Code : 00003001
Start Date : 11/8/2008
Page No : 1

Groups Printed- Heavy Trucks

	Settler Landing Southbound					Tyler St Westbound					Settler Landing Northbound					I-64 EB Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	2	2	0	4	6
11:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	0	2	2	0	4	8
12:00 PM	0	3	0	0	3	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	6
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
12:30 PM	0	1	1	0	2	1	0	1	0	2	0	2	0	0	2	0	0	0	0	0	6
12:45 PM	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	1	2	0	0	3	7
Total	0	5	1	0	6	2	0	2	0	4	0	5	0	0	5	1	4	0	0	5	20
01:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	4
01:15 PM	0	0	1	0	1	2	0	0	0	2	0	2	0	0	2	0	1	0	0	1	6
Grand Total	0	8	2	0	10	4	0	3	0	7	0	9	0	0	9	1	8	3	0	12	38
Apprch %	0.0	80.0	20.0	0.0		57.1	0.0	42.9	0.0		0.0	100.0	0.0	0.0		8.3	66.7	25.0	0.0		
Total %	0.0	21.1	5.3	0.0	26.3	10.5	0.0	7.9	0.0	18.4	0.0	23.7	0.0	0.0	23.7	2.6	21.1	7.9	0.0	31.6	

	Settler Landing Southbound					Tyler St Westbound					Settler Landing Northbound					I-64 EB Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	12:30 PM																				
Volume	0	3	2	0	5	3	0	2	0	5	0	7	0	0	7	1	4	1	0	6	23
Percent	0.0	60.0	40.0	0.0		60.0	0.0	40.0	0.0		0.0	100.0	0.0	0.0		16.7	66.7	16.7	0.0		
12:45 Volume	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	1	2	0	0	3	7
Peak Factor																					0.821
High Int.	12:30 PM					12:30 PM					12:30 PM					12:45 PM					
Volume	0	1	1	0	2	1	0	1	0	2	0	2	0	0	2	1	2	0	0	3	
Peak Factor					0.625					0.625					0.875					0.500	

Peggy Malone and Associates
904-992-8072

File Name : Settler Landing and Tyler SAT
Site Code : 00003001
Start Date : 11/8/2008
Page No : 1

Groups Printed- Vehicles - Heavy Trucks

	Settler Landing Southbound					Tyler St Westbound					Settler Landing Northbound					I-64 EB Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:30 AM	0	77	19	0	96	28	0	3	0	31	16	93	0	0	109	28	33	56	0	117	353
11:45 AM	0	63	16	0	79	39	0	18	0	57	10	89	0	0	99	16	26	54	0	96	331
Total	0	140	35	0	175	67	0	21	0	88	26	182	0	0	208	44	59	110	0	213	684
12:00 PM	0	82	17	0	99	26	0	4	0	30	12	102	0	0	114	11	28	69	0	108	351
12:15 PM	0	59	19	0	78	39	0	11	0	50	14	100	0	0	114	24	26	81	0	131	373
12:30 PM	0	90	17	0	107	25	0	6	0	31	11	90	0	0	101	11	34	65	0	110	349
12:45 PM	0	61	19	0	80	26	0	11	0	37	12	80	0	0	92	18	40	53	0	111	320
Total	0	292	72	0	364	116	0	32	0	148	49	372	0	0	421	64	128	268	0	460	1393
01:00 PM	0	57	24	0	81	24	0	6	0	30	17	117	0	0	134	19	21	56	0	96	341
01:15 PM	0	44	16	0	60	29	0	5	0	34	11	115	0	0	126	12	25	58	0	95	315
Grand Total	0	533	147	0	680	236	0	64	0	300	103	786	0	0	889	139	233	492	0	864	2733
Apprch %	0.0	78.4	21.6	0.0		78.7	0.0	21.3	0.0		11.6	88.4	0.0	0.0		16.1	27.0	56.9	0.0		
Total %	0.0	19.5	5.4	0.0	24.9	8.6	0.0	2.3	0.0	11.0	3.8	28.8	0.0	0.0	32.5	5.1	8.5	18.0	0.0	31.6	

	Settler Landing Southbound					Tyler St Westbound					Settler Landing Northbound					I-64 EB Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:30 AM to 01:15 PM - Peak 1 of 1																					
Intersection	11:30 AM																				
Volume	0	281	71	0	352	132	0	36	0	168	52	384	0	0	436	79	113	260	0	452	1408
Percent	0.0	79.8	20.2	0.0		78.6	0.0	21.4	0.0		11.9	88.1	0.0	0.0		17.5	25.0	57.5	0.0		
12:15 Volume	0	59	19	0	78	39	0	11	0	50	14	100	0	0	114	24	26	81	0	131	373
Peak Factor																					0.944
High Int.	12:00 PM					11:45 AM					12:00 PM					12:15 PM					
Volume	0	82	17	0	99	39	0	18	0	57	12	102	0	0	114	24	26	81	0	131	
Peak Factor					0.889					0.737					0.956					0.863	

Traffic Analysis

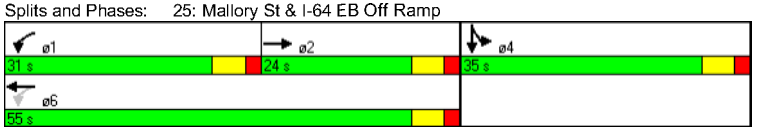
Mallory Street/I-64 EB On- and Off-Ramps

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917									0.969	
Flt Protected				0.950							0.963	
Satd. Flow (prot)	0	1708	0	1770	1863	0	0	0	0	0	1738	0
Flt Permitted				0.402							0.963	
Satd. Flow (perm)	0	1708	0	749	1863	0	0	0	0	0	1738	0
Satd. Flow (RTOR)		83									18	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	70	112	348	231	0	0	0	0	232	4	69
Adj. Flow (vph)	0	78	124	387	257	0	0	0	0	258	4	77
Lane Group Flow (vph)	0	202	0	387	257	0	0	0	0	0	339	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	24.0	0.0	31.0	55.0	0.0	0.0	0.0	0.0	35.0	35.0	0.0
Act Effct Green (s)		40.5		59.9	59.9						24.1	
Actuated g/C Ratio		0.45		0.67	0.67						0.27	
v/c Ratio		0.25		0.57	0.21						0.71	
Control Delay		12.3		9.5	7.5						30.5	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		12.3		9.5	7.5						30.5	
LOS		B		A	A						C	
Approach Delay		12.3			8.7						30.5	
Approach LOS		B			A						C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 80 (89%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 15.6 Intersection LOS: B
Intersection Capacity Utilization 57.1% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		1.00		1.00	1.00						1.00	
Frt		0.92		1.00	1.00						0.97	
Flt Protected		1.00		0.95	1.00						0.96	
Satd. Flow (prot)		1708		1770	1863						1739	
Flt Permitted		1.00		0.54	1.00						0.96	
Satd. Flow (perm)		1708		1006	1863						1739	
Volume (vph)	0	70	112	348	231	0	0	0	0	232	4	69
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	78	124	387	257	0	0	0	0	258	4	77
RTOR Reduction (vph)	0	46	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	156	0	387	257	0	0	0	0	0	326	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		37.5		56.9	56.9						21.1	
Effective Green, g (s)		40.5		59.9	59.9						24.1	
Actuated g/C Ratio		0.45		0.67	0.67						0.27	
Clearance Time (s)		6.0		6.0	6.0						6.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		769		809	1240						466	
v/s Ratio Prot		0.09		c0.09	0.14						c0.19	
v/s Ratio Perm				c0.23								
v/c Ratio		0.20		0.48	0.21						0.70	
Uniform Delay, d1		15.0		6.8	5.8						29.7	
Progression Factor		1.00		1.02	1.02						1.00	
Incremental Delay, d2		0.6		0.4	0.3						4.6	
Delay (s)		15.6		7.3	6.3						34.2	
Level of Service		B		A	A						C	
Approach Delay (s)		15.6			6.9			0.0			34.2	
Approach LOS		B			A			A			C	

Intersection Summary

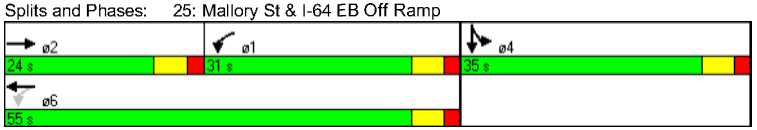
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925									0.969	
Flt Protected				0.950							0.963	
Satd. Flow (prot)	0	1723	0	1770	1863	0	0	0	0	0	1738	0
Flt Permitted				0.446							0.963	
Satd. Flow (perm)	0	1723	0	831	1863	0	0	0	0	0	1738	0
Satd. Flow (RTOR)		66									18	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	88	112	348	290	0	0	0	0	232	4	69
Adj. Flow (vph)	0	98	124	387	322	0	0	0	0	258	4	77
Lane Group Flow (vph)	0	222	0	387	322	0	0	0	0	0	339	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	24.0	0.0	31.0	55.0	0.0	0.0	0.0	0.0	35.0	35.0	0.0
Act Effct Green (s)		28.9		59.9	59.9						24.1	
Actuated g/C Ratio		0.32		0.67	0.67						0.27	
v/c Ratio		0.37		0.46	0.26						0.71	
Control Delay		20.2		8.8	4.4						30.5	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		20.2		8.8	4.4						30.5	
LOS		C		A	A						C	
Approach Delay		20.2			6.8						30.5	
Approach LOS		C			A						C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 71 (79%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 58.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



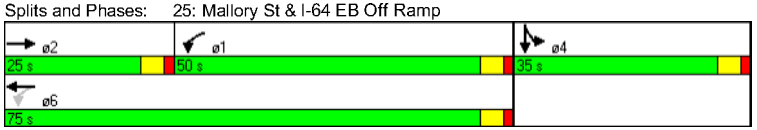
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		1.00		1.00	1.00						1.00	
Frt		0.92		1.00	1.00						0.97	
Flt Protected		1.00		0.95	1.00						0.96	
Satd. Flow (prot)		1722		1770	1863						1739	
Flt Permitted		1.00		0.51	1.00						0.96	
Satd. Flow (perm)		1722		952	1863						1739	
Volume (vph)	0	88	112	348	290	0	0	0	0	232	4	69
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	98	124	387	322	0	0	0	0	258	4	77
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	177	0	387	322	0	0	0	0	0	326	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		25.9		56.9	56.9						21.1	
Effective Green, g (s)		28.9		59.9	59.9						24.1	
Actuated g/C Ratio		0.32		0.67	0.67						0.27	
Clearance Time (s)		6.0		6.0	6.0						6.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		553		888	1240						466	
v/s Ratio Prot		0.10		c0.14	0.17						c0.19	
v/s Ratio Perm				c0.15								
v/c Ratio		0.32		0.44	0.26						0.70	
Uniform Delay, d1		23.1		10.6	6.1						29.7	
Progression Factor		1.00		0.64	0.55						1.00	
Incremental Delay, d2		1.5		0.3	0.4						4.6	
Delay (s)		24.6		7.0	3.7						34.2	
Level of Service		C		A	A						C	
Approach Delay (s)		24.6			5.5			0.0			34.2	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925									0.968	
Flt Protected				0.950							0.964	
Satd. Flow (prot)	0	1723	0	1770	1863	0	0	0	0	0	1738	0
Flt Permitted				0.387							0.964	
Satd. Flow (perm)	0	1723	0	721	1863	0	0	0	0	0	1738	0
Satd. Flow (RTOR)		52									14	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	88	112	515	290	0	0	0	0	221	4	69
Adj. Flow (vph)	0	98	124	572	322	0	0	0	0	246	4	77
Lane Group Flow (vph)	0	222	0	572	322	0	0	0	0	0	327	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	25.0	0.0	50.0	75.0	0.0	0.0	0.0	0.0	35.0	35.0	0.0
Act Effct Green (s)		28.2		78.2	78.2						25.8	
Actuated g/C Ratio		0.26		0.71	0.71						0.23	
v/c Ratio		0.46		0.60	0.24						0.78	
Control Delay		31.3		9.9	3.4						42.9	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		31.4		9.9	3.4						42.9	
LOS		C		A	A						D	
Approach Delay		31.4			7.6						42.9	
Approach LOS		C			A						D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 1 (1%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 66.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



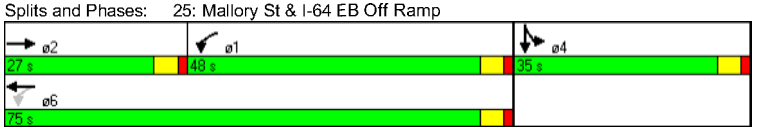
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		1.00		1.00	1.00						1.00	
Frt		0.92		1.00	1.00						0.97	
Flt Protected		1.00		0.95	1.00						0.96	
Satd. Flow (prot)		1722		1770	1863						1738	
Flt Permitted		1.00		0.45	1.00						0.96	
Satd. Flow (perm)		1722		839	1863						1738	
Volume (vph)	0	88	112	515	290	0	0	0	0	221	4	69
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	98	124	572	322	0	0	0	0	246	4	77
RTOR Reduction (vph)	0	39	0	0	0	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	183	0	572	322	0	0	0	0	0	316	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		26.2		76.2	76.2						23.8	
Effective Green, g (s)		28.2		78.2	78.2						25.8	
Actuated g/C Ratio		0.26		0.71	0.71						0.23	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		441		994	1324						408	
v/s Ratio Prot		0.11		c0.25	0.17						c0.18	
v/s Ratio Perm				c0.16								
v/c Ratio		0.42		0.58	0.24						0.78	
Uniform Delay, d1		34.0		12.3	5.6						39.4	
Progression Factor		1.00		0.56	0.49						1.00	
Incremental Delay, d2		2.9		0.5	0.3						8.9	
Delay (s)		36.9		7.4	3.0						48.3	
Level of Service		D		A	A						D	
Approach Delay (s)		36.9			5.8			0.0			48.3	
Approach LOS		D			A			A			D	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.916									0.968	
Flt Protected				0.950							0.964	
Satd. Flow (prot)	0	3242	0	1770	3539	0	0	0	0	0	1738	0
Flt Permitted				0.546							0.964	
Satd. Flow (perm)	0	3242	0	1017	3539	0	0	0	0	0	1738	0
Satd. Flow (RTOR)		124									14	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	88	112	515	290	0	0	0	0	221	4	69
Adj. Flow (vph)	0	98	124	572	322	0	0	0	0	246	4	77
Lane Group Flow (vph)	0	222	0	572	322	0	0	0	0	0	327	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	27.0	0.0	48.0	75.0	0.0	0.0	0.0	0.0	35.0	35.0	0.0
Act Effct Green (s)		30.2		78.2	78.2						25.8	
Actuated g/C Ratio		0.27		0.71	0.71						0.23	
v/c Ratio		0.23		0.55	0.13						0.78	
Control Delay		15.5		11.3	2.5						42.9	
Queue Delay		0.0		0.1	0.0						0.0	
Total Delay		15.5		11.3	2.5						42.9	
LOS		B		B	A						D	
Approach Delay		15.5			8.1						42.9	
Approach LOS		B			A						D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 8 (7%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



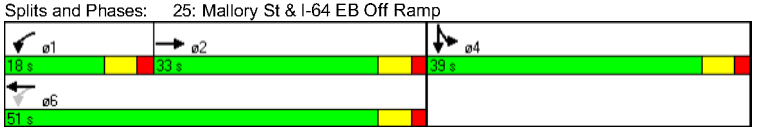
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		0.95		1.00	0.95						1.00	
Frt		0.92		1.00	1.00						0.97	
Flt Protected		1.00		0.95	1.00						0.96	
Satd. Flow (prot)		3243		1770	3539						1738	
Flt Permitted		1.00		0.57	1.00						0.96	
Satd. Flow (perm)		3243		1055	3539						1738	
Volume (vph)	0	88	112	515	290	0	0	0	0	221	4	69
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	98	124	572	322	0	0	0	0	246	4	77
RTOR Reduction (vph)	0	90	0	0	0	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	132	0	572	322	0	0	0	0	0	316	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		28.2		76.2	76.2						23.8	
Effective Green, g (s)		30.2		78.2	78.2						25.8	
Actuated g/C Ratio		0.27		0.71	0.71						0.23	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		890		1043	2516						408	
v/s Ratio Prot		0.04		c0.22	0.09						c0.18	
v/s Ratio Perm				c0.17								
v/c Ratio		0.15		0.55	0.13						0.78	
Uniform Delay, d1		30.2		10.3	5.1						39.4	
Progression Factor		1.00		0.78	0.42						1.00	
Incremental Delay, d2		0.4		0.6	0.1						8.9	
Delay (s)		30.5		8.6	2.2						48.3	
Level of Service		C		A	A						D	
Approach Delay (s)		30.5			6.3			0.0			48.3	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963									0.996	
Flt Protected				0.950							0.954	
Satd. Flow (prot)	0	1794	0	1770	1863	0	0	0	0	0	1770	0
Flt Permitted				0.515							0.954	
Satd. Flow (perm)	0	1794	0	959	1863	0	0	0	0	0	1770	0
Satd. Flow (RTOR)		23									2	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	117	44	167	51	0	0	0	0	332	1	10
Adj. Flow (vph)	0	130	49	186	57	0	0	0	0	369	1	11
Lane Group Flow (vph)	0	179	0	186	57	0	0	0	0	0	381	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	33.0	0.0	18.0	51.0	0.0	0.0	0.0	0.0	39.0	39.0	0.0
Act Effct Green (s)		43.3		57.7	57.7						26.3	
Actuated g/C Ratio		0.48		0.64	0.64						0.29	
v/c Ratio		0.20		0.26	0.05						0.73	
Control Delay		14.6		8.7	9.1						30.7	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		14.6		8.7	9.1						30.7	
LOS		B		A	A						C	
Approach Delay		14.6			8.8						30.7	
Approach LOS		B			A						C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 54 (60%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 47.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



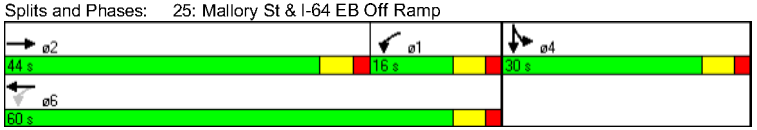
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		1.00		1.00	1.00						1.00	
Frt		0.96		1.00	1.00						1.00	
Flt Protected		1.00		0.95	1.00						0.95	
Satd. Flow (prot)		1794		1770	1863						1770	
Flt Permitted		1.00		0.57	1.00						0.95	
Satd. Flow (perm)		1794		1067	1863						1770	
Volume (vph)	0	117	44	167	51	0	0	0	0	332	1	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	130	49	186	57	0	0	0	0	369	1	11
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	167	0	186	57	0	0	0	0	0	380	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		40.3		54.7	54.7						23.3	
Effective Green, g (s)		43.3		57.7	57.7						26.3	
Actuated g/C Ratio		0.48		0.64	0.64						0.29	
Clearance Time (s)		6.0		6.0	6.0						6.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		863		773	1194						517	
v/s Ratio Prot		0.09		c0.03	0.03						c0.21	
v/s Ratio Perm				c0.12								
v/c Ratio		0.19		0.24	0.05						0.73	
Uniform Delay, d1		13.4		6.7	6.0						28.7	
Progression Factor		1.00		1.07	1.16						1.00	
Incremental Delay, d2		0.5		0.1	0.0						5.4	
Delay (s)		13.9		7.2	7.0						34.1	
Level of Service		B		A	A						C	
Approach Delay (s)		13.9			7.1			0.0			34.1	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969									0.996	
Flt Protected				0.950							0.954	
Satd. Flow (prot)	0	1805	0	1770	1863	0	0	0	0	0	1770	0
Flt Permitted				0.575							0.954	
Satd. Flow (perm)	0	1805	0	1071	1863	0	0	0	0	0	1770	0
Satd. Flow (RTOR)		22									2	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	147	44	167	64	0	0	0	0	332	1	10
Adj. Flow (vph)	0	163	49	186	71	0	0	0	0	369	1	11
Lane Group Flow (vph)	0	212	0	186	71	0	0	0	0	0	381	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	44.0	0.0	16.0	60.0	0.0	0.0	0.0	0.0	30.0	30.0	0.0
Act Effct Green (s)		43.3		59.3	59.3						24.7	
Actuated g/C Ratio		0.48		0.66	0.66						0.27	
v/c Ratio		0.24		0.23	0.06						0.78	
Control Delay		13.8		2.7	2.5						38.1	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		13.8		2.7	2.5						38.1	
LOS		B		A	A						D	
Approach Delay		13.8			2.6						38.1	
Approach LOS		B			A						D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 40 (44%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 21.3	Intersection LOS: C
Intersection Capacity Utilization 48.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



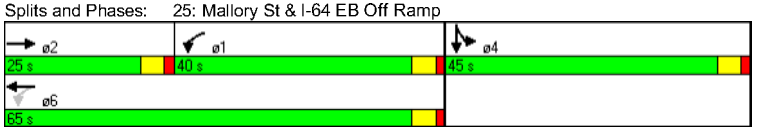
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		1.00		1.00	1.00						1.00	
Frt		0.97		1.00	1.00						1.00	
Flt Protected		1.00		0.95	1.00						0.95	
Satd. Flow (prot)		1805		1770	1863						1770	
Flt Permitted		1.00		0.58	1.00						0.95	
Satd. Flow (perm)		1805		1083	1863						1770	
Volume (vph)	0	147	44	167	64	0	0	0	0	332	1	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	163	49	186	71	0	0	0	0	369	1	11
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	201	0	186	71	0	0	0	0	0	380	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		40.3		56.3	56.3						21.7	
Effective Green, g (s)		43.3		59.3	59.3						24.7	
Actuated g/C Ratio		0.48		0.66	0.66						0.27	
Clearance Time (s)		6.0		6.0	6.0						6.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		868		813	1228						486	
v/s Ratio Prot		0.11		c0.03	0.04						c0.21	
v/s Ratio Perm				c0.12								
v/c Ratio		0.23		0.23	0.06						0.78	
Uniform Delay, d1		13.6		7.6	5.4						30.2	
Progression Factor		1.00		0.34	0.39						1.00	
Incremental Delay, d2		0.6		0.0	0.0						8.0	
Delay (s)		14.3		2.7	2.2						38.1	
Level of Service		B		A	A						D	
Approach Delay (s)		14.3			2.5			0.0			38.1	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969									0.997	
Flt Protected				0.950							0.954	
Satd. Flow (prot)	0	1805	0	1770	1863	0	0	0	0	0	1772	0
Flt Permitted				0.407							0.954	
Satd. Flow (perm)	0	1805	0	758	1863	0	0	0	0	0	1772	0
Satd. Flow (RTOR)		12									1	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	147	44	410	64	0	0	0	0	393	1	10
Adj. Flow (vph)	0	163	49	456	71	0	0	0	0	437	1	11
Lane Group Flow (vph)	0	212	0	456	71	0	0	0	0	0	449	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	25.0	0.0	40.0	65.0	0.0	0.0	0.0	0.0	45.0	45.0	0.0
Act Effct Green (s)		30.6		70.6	70.6						33.4	
Actuated g/C Ratio		0.28		0.64	0.64						0.30	
v/c Ratio		0.41		0.55	0.06						0.83	
Control Delay		35.7		8.8	1.0						40.0	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		35.7		8.8	1.0						40.0	
LOS		D		A	A						D	
Approach Delay		35.7			7.7						40.0	
Approach LOS		D			A						D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 63 (57%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 24.9	Intersection LOS: C
Intersection Capacity Utilization 65.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



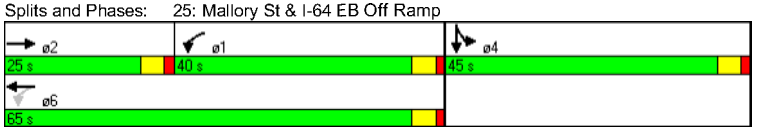
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		1.00		1.00	1.00						1.00	
Frt		0.97		1.00	1.00						1.00	
Flt Protected		1.00		0.95	1.00						0.95	
Satd. Flow (prot)		1805		1770	1863						1770	
Flt Permitted		1.00		0.48	1.00						0.95	
Satd. Flow (perm)		1805		901	1863						1770	
Volume (vph)	0	147	44	410	64	0	0	0	0	393	1	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	163	49	456	71	0	0	0	0	437	1	11
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	203	0	456	71	0	0	0	0	0	448	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		28.6		68.6	68.6						31.4	
Effective Green, g (s)		30.6		70.6	70.6						33.4	
Actuated g/C Ratio		0.28		0.64	0.64						0.30	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		502		871	1196						537	
v/s Ratio Prot		0.11		c0.18	0.04						c0.25	
v/s Ratio Perm				c0.16								
v/c Ratio		0.41		0.52	0.06						0.83	
Uniform Delay, d1		32.3		15.8	7.3						35.7	
Progression Factor		1.00		0.49	0.11						1.00	
Incremental Delay, d2		2.4		0.1	0.0						10.8	
Delay (s)		34.7		7.7	0.8						46.5	
Level of Service		C		A	A						D	
Approach Delay (s)		34.7			6.8			0.0			46.5	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.965									0.997	
Flt Protected				0.950							0.954	
Satd. Flow (prot)	0	3415	0	1770	3539	0	0	0	0	0	1772	0
Flt Permitted				0.549							0.954	
Satd. Flow (perm)	0	3415	0	1023	3539	0	0	0	0	0	1772	0
Satd. Flow (RTOR)		32									1	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	147	44	410	64	0	0	0	0	393	1	10
Adj. Flow (vph)	0	163	49	456	71	0	0	0	0	437	1	11
Lane Group Flow (vph)	0	212	0	456	71	0	0	0	0	0	449	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	25.0	0.0	40.0	65.0	0.0	0.0	0.0	0.0	45.0	45.0	0.0
Act Effct Green (s)		30.6		70.6	70.6						33.4	
Actuated g/C Ratio		0.28		0.64	0.64						0.30	
v/c Ratio		0.22		0.50	0.03						0.83	
Control Delay		28.4		14.4	1.2						40.0	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		28.4		14.4	1.2						40.0	
LOS		C		B	A						D	
Approach Delay		28.4			12.6						40.0	
Approach LOS		C			B						D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 24 (22%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 25.8	Intersection LOS: C
Intersection Capacity Utilization 60.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



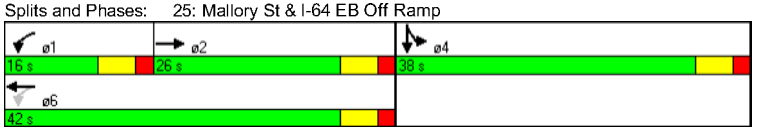
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		0.95		1.00	0.95						1.00	
Frt		0.97		1.00	1.00						1.00	
Flt Protected		1.00		0.95	1.00						0.95	
Satd. Flow (prot)		3417		1770	3539						1770	
Flt Permitted		1.00		0.58	1.00						0.95	
Satd. Flow (perm)		3417		1076	3539						1770	
Volume (vph)	0	147	44	410	64	0	0	0	0	393	1	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	163	49	456	71	0	0	0	0	437	1	11
RTOR Reduction (vph)	0	23	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	189	0	456	71	0	0	0	0	0	448	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		28.6		68.6	68.6						31.4	
Effective Green, g (s)		30.6		70.6	70.6						33.4	
Actuated g/C Ratio		0.28		0.64	0.64						0.30	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		951		924	2271						537	
v/s Ratio Prot		0.06		c0.17	0.02						c0.25	
v/s Ratio Perm				c0.15								
v/c Ratio		0.20		0.49	0.03						0.83	
Uniform Delay, d1		30.3		13.0	7.2						35.7	
Progression Factor		1.00		0.86	0.13						1.00	
Incremental Delay, d2		0.5		0.4	0.0						10.8	
Delay (s)		30.8		11.6	1.0						46.5	
Level of Service		C		B	A						D	
Approach Delay (s)		30.8			10.2			0.0			46.5	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.937									0.989	
Flt Protected				0.950							0.956	
Satd. Flow (prot)	0	1745	0	1770	1863	0	0	0	0	0	1761	0
Flt Permitted				0.518							0.956	
Satd. Flow (perm)	0	1745	0	965	1863	0	0	0	0	0	1761	0
Satd. Flow (RTOR)		56									7	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	76	67	118	56	0	0	0	0	201	0	17
Adj. Flow (vph)	0	84	74	131	62	0	0	0	0	223	0	19
Lane Group Flow (vph)	0	158	0	131	62	0	0	0	0	0	242	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	26.0	0.0	16.0	42.0	0.0	0.0	0.0	0.0	38.0	38.0	0.0
Act Effct Green (s)		44.3		56.2	56.2						17.8	
Actuated g/C Ratio		0.55		0.70	0.70						0.22	
v/c Ratio		0.16		0.17	0.05						0.61	
Control Delay		8.4		7.1	6.7						27.4	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		8.4		7.1	6.7						27.4	
LOS		A		A	A						C	
Approach Delay		8.4			7.0						27.4	
Approach LOS		A			A						C	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 21 (26%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 36.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



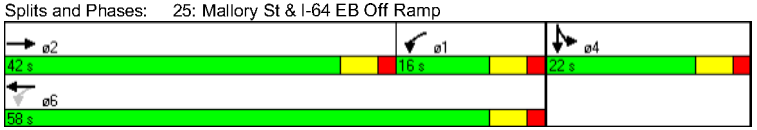
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		1.00		1.00	1.00						1.00	
Frt		0.94		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.96	
Satd. Flow (prot)		1745		1770	1863						1762	
Flt Permitted		1.00		0.61	1.00						0.96	
Satd. Flow (perm)		1745		1130	1863						1762	
Volume (vph)	0	76	67	118	56	0	0	0	0	201	0	17
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	84	74	131	62	0	0	0	0	223	0	19
RTOR Reduction (vph)	0	26	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	132	0	131	62	0	0	0	0	0	237	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		40.2		53.2	53.2						14.8	
Effective Green, g (s)		43.2		56.2	56.2						17.8	
Actuated g/C Ratio		0.54		0.70	0.70						0.22	
Clearance Time (s)		6.0		6.0	6.0						6.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		942		874	1309						392	
v/s Ratio Prot		0.08		c0.02	0.03						c0.13	
v/s Ratio Perm				c0.09								
v/c Ratio		0.14		0.15	0.05						0.60	
Uniform Delay, d1		9.2		3.9	3.7						27.9	
Progression Factor		1.00		1.42	1.40						1.00	
Incremental Delay, d2		0.3		0.1	0.1						2.6	
Delay (s)		9.5		5.6	5.2						30.5	
Level of Service		A		A	A						C	
Approach Delay (s)		9.5			5.5			0.0			30.5	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.945									0.989	
Flt Protected				0.950							0.956	
Satd. Flow (prot)	0	1760	0	1770	1863	0	0	0	0	0	1761	0
Flt Permitted				0.619							0.956	
Satd. Flow (perm)	0	1760	0	1153	1863	0	0	0	0	0	1761	0
Satd. Flow (RTOR)		61									5	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	96	67	118	70	0	0	0	0	201	0	17
Adj. Flow (vph)	0	107	74	131	78	0	0	0	0	223	0	19
Lane Group Flow (vph)	0	181	0	131	78	0	0	0	0	0	242	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	42.0	0.0	16.0	58.0	0.0	0.0	0.0	0.0	22.0	22.0	0.0
Act Effct Green (s)		44.1		56.9	56.9						17.1	
Actuated g/C Ratio		0.55		0.71	0.71						0.21	
v/c Ratio		0.18		0.14	0.06						0.64	
Control Delay		8.0		3.6	2.8						33.5	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		8.0		3.6	2.8						33.5	
LOS		A		A	A						C	
Approach Delay		8.0			3.3						33.5	
Approach LOS		A			A						C	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 12 (15%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 16.2	Intersection LOS: B
Intersection Capacity Utilization 37.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



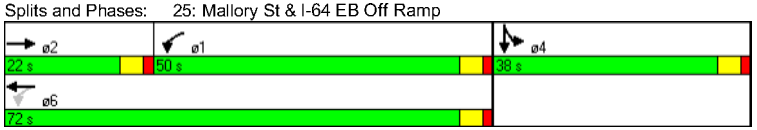
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		1.00		1.00	1.00						1.00	
Frt		0.94		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.96	
Satd. Flow (prot)		1760		1770	1863						1762	
Flt Permitted		1.00		0.63	1.00						0.96	
Satd. Flow (perm)		1760		1168	1863						1762	
Volume (vph)	0	96	67	118	70	0	0	0	0	201	0	17
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	107	74	131	78	0	0	0	0	223	0	19
RTOR Reduction (vph)	0	28	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	153	0	131	78	0	0	0	0	0	238	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		39.9		53.9	53.9						14.1	
Effective Green, g (s)		42.9		56.9	56.9						17.1	
Actuated g/C Ratio		0.54		0.71	0.71						0.21	
Clearance Time (s)		6.0		6.0	6.0						6.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		944		914	1325						377	
v/s Ratio Prot		c0.09		c0.02	0.04						c0.14	
v/s Ratio Perm				0.08								
v/c Ratio		0.16		0.14	0.06						0.63	
Uniform Delay, d1		9.4		4.1	3.5						28.6	
Progression Factor		1.00		0.77	0.67						1.00	
Incremental Delay, d2		0.4		0.1	0.1						3.4	
Delay (s)		9.8		3.3	2.4						32.0	
Level of Service		A		A	A						C	
Approach Delay (s)		9.8			2.9			0.0			32.0	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.945									0.993	
Flt Protected				0.950							0.955	
Satd. Flow (prot)	0	1760	0	1770	1863	0	0	0	0	0	1766	0
Flt Permitted				0.433							0.955	
Satd. Flow (perm)	0	1760	0	807	1863	0	0	0	0	0	1766	0
Satd. Flow (RTOR)		27									3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	96	67	548	70	0	0	0	0	295	0	17
Adj. Flow (vph)	0	107	74	609	78	0	0	0	0	328	0	19
Lane Group Flow (vph)	0	181	0	609	78	0	0	0	0	0	347	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	22.0	0.0	50.0	72.0	0.0	0.0	0.0	0.0	38.0	38.0	0.0
Act Effct Green (s)		26.5		76.5	76.5						27.5	
Actuated g/C Ratio		0.24		0.70	0.70						0.25	
v/c Ratio		0.41		0.63	0.06						0.78	
Control Delay		34.9		9.4	1.4						42.4	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		34.9		9.4	1.4						42.4	
LOS		C		A	A						D	
Approach Delay		34.9			8.5						42.4	
Approach LOS		C			A						D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 47 (43%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 22.1	Intersection LOS: C
Intersection Capacity Utilization 66.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		1.00		1.00	1.00						1.00	
Frt		0.94		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.95	
Satd. Flow (prot)		1760		1770	1863						1766	
Flt Permitted		1.00		0.51	1.00						0.95	
Satd. Flow (perm)		1760		941	1863						1766	
Volume (vph)	0	96	67	548	70	0	0	0	0	295	0	17
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	107	74	609	78	0	0	0	0	328	0	19
RTOR Reduction (vph)	0	20	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	161	0	609	78	0	0	0	0	0	345	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		24.5		74.5	74.5						25.5	
Effective Green, g (s)		26.5		76.5	76.5						27.5	
Actuated g/C Ratio		0.24		0.70	0.70						0.25	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		424		1009	1296						442	
v/s Ratio Prot		0.09		c0.26	0.04						c0.20	
v/s Ratio Perm				c0.16								
v/c Ratio		0.38		0.60	0.06						0.78	
Uniform Delay, d1		34.9		12.2	5.3						38.4	
Progression Factor		1.00		0.60	0.22						1.00	
Incremental Delay, d2		2.6		0.1	0.0						8.5	
Delay (s)		37.4		7.4	1.2						46.9	
Level of Service		D		A	A						D	
Approach Delay (s)		37.4			6.7			0.0			46.9	
Approach LOS		D			A			A			D	

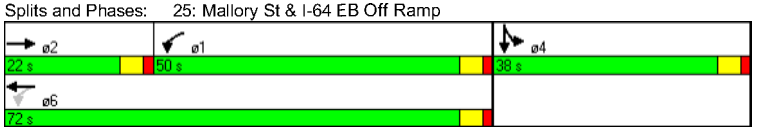
Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.939									0.993	
Flt Protected				0.950							0.955	
Satd. Flow (prot)	0	3323	0	1770	3539	0	0	0	0	0	1766	0
Flt Permitted				0.577							0.955	
Satd. Flow (perm)	0	3323	0	1075	3539	0	0	0	0	0	1766	0
Satd. Flow (RTOR)		74									3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	96	67	548	70	0	0	0	0	295	0	17
Adj. Flow (vph)	0	107	74	609	78	0	0	0	0	328	0	19
Lane Group Flow (vph)	0	181	0	609	78	0	0	0	0	0	347	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Total Split (s)	0.0	22.0	0.0	50.0	72.0	0.0	0.0	0.0	0.0	38.0	38.0	0.0
Act Effct Green (s)		26.5		76.5	76.5						27.5	
Actuated g/C Ratio		0.24		0.70	0.70						0.25	
v/c Ratio		0.21		0.58	0.03						0.78	
Control Delay		21.9		18.8	1.3						42.4	
Queue Delay		0.0		0.2	0.0						0.0	
Total Delay		21.9		18.9	1.3						42.4	
LOS		C		B	A						D	
Approach Delay		21.9			16.9						42.4	
Approach LOS		C			B						D	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 47 (43%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 24.9 Intersection LOS: C
Intersection Capacity Utilization 62.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 25: Mallory St & I-64 EB Off Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0						3.0	
Lane Util. Factor		0.95		1.00	0.95						1.00	
Frt		0.94		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.95	
Satd. Flow (prot)		3322		1770	3539						1766	
Flt Permitted		1.00		0.60	1.00						0.95	
Satd. Flow (perm)		3322		1121	3539						1766	
Volume (vph)	0	96	67	548	70	0	0	0	0	295	0	17
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	107	74	609	78	0	0	0	0	328	0	19
RTOR Reduction (vph)	0	56	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	125	0	609	78	0	0	0	0	0	345	0
Turn Type				pm+pt						Split		
Protected Phases		2		1	6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		24.5		74.5	74.5						25.5	
Effective Green, g (s)		26.5		76.5	76.5						27.5	
Actuated g/C Ratio		0.24		0.70	0.70						0.25	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		800		1057	2461						442	
v/s Ratio Prot		0.04		c0.25	0.02						c0.20	
v/s Ratio Perm				c0.15								
v/c Ratio		0.16		0.58	0.03						0.78	
Uniform Delay, d1		32.9		10.4	5.2						38.4	
Progression Factor		1.00		1.31	0.20						1.00	
Incremental Delay, d2		0.4		0.7	0.0						8.5	
Delay (s)		33.3		14.3	1.1						46.9	
Level of Service		C		B	A						D	
Approach Delay (s)		33.3			12.8			0.0			46.9	
Approach LOS		C			B			A			D	

Intersection Summary

HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Traffic Analysis

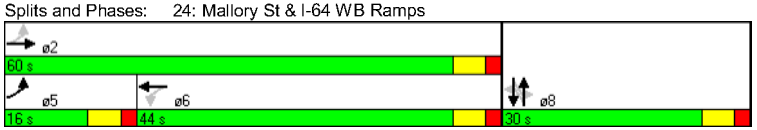
Mallory Street/
I-64 WB On- and Off-Ramps/Segar Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.933			0.996			0.955	
Flt Protected	0.950							0.985			0.971	
Satd. Flow (prot)	1770	1846	0	0	1738	0	0	1827	0	0	1727	0
Flt Permitted	0.221							0.885			0.788	
Satd. Flow (perm)	412	1846	0	0	1738	0	0	1642	0	0	1402	0
Satd. Flow (RTOR)		7			72			2			28	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	40	479	31	1	335	330	20	43	2	161	18	89
Adj. Flow (vph)	44	532	34	1	372	367	22	48	2	179	20	99
Lane Group Flow (vph)	44	566	0	0	740	0	0	72	0	0	298	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Total Split (s)	16.0	60.0	0.0	44.0	44.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Act Effct Green (s)	60.6	60.6			52.5			23.4			23.4	
Actuated g/C Ratio	0.67	0.67			0.58			0.26			0.26	
v/c Ratio	0.10	0.45			0.71			0.17			0.77	
Control Delay	7.0	12.5			21.0			24.2			35.7	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	7.0	12.5			21.0			24.2			35.7	
LOS	A	B			C			C			D	
Approach Delay		12.1			21.0			24.2			35.7	
Approach LOS		B			C			C			D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 80 (89%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 20.5 Intersection LOS: C
Intersection Capacity Utilization 67.3% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			0.93			1.00			0.96	
Flt Protected	0.95	1.00			1.00			0.98			0.97	
Satd. Flow (prot)	1770	1846			1738			1828			1727	
Flt Permitted	0.28	1.00			1.00			0.88			0.79	
Satd. Flow (perm)	527	1846			1737			1634			1397	
Volume (vph)	40	479	31	1	335	330	20	43	2	161	18	89
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	532	34	1	372	367	22	48	2	179	20	99
RTOR Reduction (vph)	0	2	0	0	32	0	0	1	0	0	21	0
Lane Group Flow (vph)	44	564	0	0	708	0	0	71	0	0	277	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Actuated Green, G (s)	57.6	57.6			47.1			20.4			20.4	
Effective Green, g (s)	60.6	60.6			50.1			23.4			23.4	
Actuated g/C Ratio	0.67	0.67			0.56			0.26			0.26	
Clearance Time (s)	6.0	6.0			6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	458	1243			967			425			363	
v/s Ratio Prot	0.01	c0.31										
v/s Ratio Perm	0.06				c0.41			0.04			c0.20	
v/c Ratio	0.10	0.45			0.73			0.17			0.76	
Uniform Delay, d1	7.1	6.9			14.9			25.8			30.7	
Progression Factor	1.11	1.46			1.08			1.00			1.00	
Incremental Delay, d2	0.1	1.2			4.8			0.2			9.2	
Delay (s)	7.9	11.2			21.0			25.9			40.0	
Level of Service	A	B			C			C			D	
Approach Delay (s)		11.0			21.0			25.9			40.0	
Approach LOS		B			C			C			D	

Intersection Summary

HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

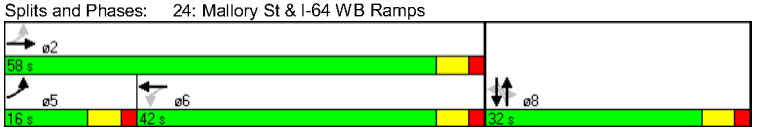
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.941			0.996			0.955	
Flt Protected	0.950							0.985			0.971	
Satd. Flow (prot)	1770	1850	0	0	1753	0	0	1827	0	0	1727	0
Flt Permitted	0.170							0.882			0.789	
Satd. Flow (perm)	317	1850	0	0	1753	0	0	1636	0	0	1404	0
Satd. Flow (RTOR)		5			55			2			29	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	40	602	31	1	421	330	20	43	2	161	18	89
Adj. Flow (vph)	44	669	34	1	468	367	22	48	2	179	20	99
Lane Group Flow (vph)	44	703	0	0	836	0	0	72	0	0	298	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Total Split (s)	16.0	58.0	0.0	42.0	42.0	0.0	32.0	32.0	0.0	32.0	32.0	0.0
Act Effct Green (s)	59.9	59.9			52.6			24.1			24.1	
Actuated g/C Ratio	0.67	0.67			0.58			0.27			0.27	
v/c Ratio	0.12	0.57			0.80			0.16			0.75	
Control Delay	4.4	7.0			27.9			23.2			32.8	
Queue Delay	0.0	0.4			0.0			0.0			0.0	
Total Delay	4.4	7.4			27.9			23.2			32.8	
LOS	A	A			C			C			C	
Approach Delay		7.2			27.9			23.2			32.8	
Approach LOS		A			C			C			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 76 (84%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 20.6 Intersection LOS: C
Intersection Capacity Utilization 71.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			0.94			1.00			0.96	
Flt Protected	0.95	1.00			1.00			0.98			0.97	
Satd. Flow (prot)	1770	1849			1752			1828			1727	
Flt Permitted	0.25	1.00			1.00			0.88			0.79	
Satd. Flow (perm)	466	1849			1752			1636			1398	
Volume (vph)	40	602	31	1	421	330	20	43	2	161	18	89
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	669	34	1	468	367	22	48	2	179	20	99
RTOR Reduction (vph)	0	2	0	0	24	0	0	1	0	0	21	0
Lane Group Flow (vph)	44	701	0	0	812	0	0	71	0	0	277	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Actuated Green, G (s)	56.9	56.9			47.2			21.1			21.1	
Effective Green, g (s)	59.9	59.9			50.2			24.1			24.1	
Actuated g/C Ratio	0.67	0.67			0.56			0.27			0.27	
Clearance Time (s)	6.0	6.0			6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	407	1231			977			438			374	
v/s Ratio Prot	0.01	c0.38										
v/s Ratio Perm	0.06				0.46			0.04			c0.20	
v/c Ratio	0.11	0.57			0.83			0.16			0.74	
Uniform Delay, d1	7.8	8.1			16.4			25.2			30.1	
Progression Factor	0.60	0.54			1.23			1.00			1.00	
Incremental Delay, d2	0.1	1.9			8.0			0.2			7.7	
Delay (s)	4.8	6.3			28.1			25.4			37.8	
Level of Service	A	A			C			C			D	
Approach Delay (s)		6.2			28.1			25.4			37.8	
Approach LOS		A			C			C			D	

Intersection Summary

HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

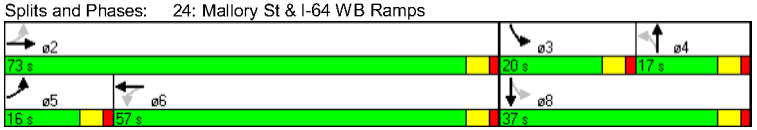
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.950			0.996			0.951	
Flt Protected	0.950							0.985			0.973	
Satd. Flow (prot)	1770	1850	0	0	1770	0	0	1827	0	0	1724	0
Flt Permitted	0.153							0.843			0.687	
Satd. Flow (perm)	285	1850	0	0	1770	0	0	1564	0	0	1217	0
Satd. Flow (RTOR)		5			38			1			27	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	40	591	31	1	588	351	20	43	2	138	18	89
Adj. Flow (vph)	44	657	34	1	653	390	22	48	2	153	20	99
Lane Group Flow (vph)	44	691	0	0	1044	0	0	72	0	0	272	0
Turn Type	pm+pt			Perm			Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6			4			8		
Total Split (s)	16.0	73.0	0.0	57.0	57.0	0.0	17.0	17.0	0.0	20.0	37.0	0.0
Act Effct Green (s)	76.2	76.2			69.3			27.8			27.8	
Actuated g/C Ratio	0.69	0.69			0.63			0.25			0.25	
v/c Ratio	0.14	0.54			0.93			0.18			0.83	
Control Delay	4.5	8.4			30.5			30.6			43.6	
Queue Delay	0.0	0.9			0.0			0.0			0.0	
Total Delay	4.5	9.3			30.5			30.6			43.6	
LOS	A	A			C			C			D	
Approach Delay		9.1			30.5			30.6			43.6	
Approach LOS		A			C			C			D	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 29 (26%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 24.8 Intersection LOS: C
Intersection Capacity Utilization 80.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			0.95			1.00			0.95	
Flt Protected	0.95	1.00			1.00			0.98			0.97	
Satd. Flow (prot)	1770	1849			1769			1828			1723	
Flt Permitted	0.21	1.00			1.00			0.88			0.78	
Satd. Flow (perm)	397	1849			1768			1638			1384	
Volume (vph)	40	591	31	1	588	351	20	43	2	138	18	89
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	657	34	1	653	390	22	48	2	153	20	99
RTOR Reduction (vph)	0	2	0	0	15	0	0	1	0	0	20	0
Lane Group Flow (vph)	44	689	0	0	1029	0	0	71	0	0	252	0
Turn Type	pm+pt			Perm			Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	74.2	74.2			65.3			25.8			25.8	
Effective Green, g (s)	76.2	76.2			67.3			27.8			27.8	
Actuated g/C Ratio	0.69	0.69			0.61			0.25			0.25	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	349	1281			1082			414			350	
v/s Ratio Prot	0.01	c0.37										
v/s Ratio Perm	0.08				c0.58			0.04			c0.18	
v/c Ratio	0.13	0.54			0.95			0.17			0.72	
Uniform Delay, d1	8.5	8.3			19.8			32.1			37.5	
Progression Factor	0.57	0.71			0.74			1.00			1.00	
Incremental Delay, d2	0.2	1.6			16.9			0.2			6.9	
Delay (s)	5.0	7.4			31.5			32.3			44.5	
Level of Service	A	A			C			C			D	
Approach Delay (s)		7.3			31.5			32.3			44.5	
Approach LOS		A			C			C			D	

Intersection Summary

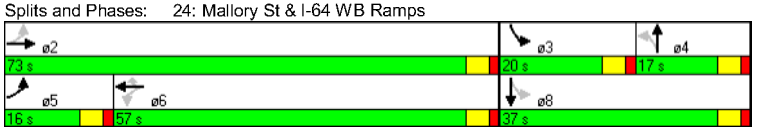
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993				0.850		0.996			0.875	
Flt Protected	0.950							0.985		0.950		
Satd. Flow (prot)	1770	3514	0	0	3539	1583	0	1827	0	1770	1630	0
Flt Permitted	0.310				0.955			0.887		0.569		
Satd. Flow (perm)	577	3514	0	0	3380	1583	0	1646	0	1060	1630	0
Satd. Flow (RTOR)		9				364		1			99	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	40	591	31	1	588	351	20	43	2	138	18	89
Adj. Flow (vph)	44	657	34	1	653	390	22	48	2	153	20	99
Lane Group Flow (vph)	44	691	0	0	654	390	0	72	0	153	119	0
Turn Type	pm+pt			Perm		Perm	Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6		6	4			8		
Total Split (s)	16.0	73.0	0.0	57.0	57.0	57.0	17.0	17.0	0.0	20.0	37.0	0.0
Act Effct Green (s)	77.0	77.0			70.1	70.1		11.6		27.0	27.0	
Actuated g/C Ratio	0.70	0.70			0.64	0.64		0.11		0.25	0.25	
v/c Ratio	0.09	0.28			0.30	0.34		0.41		0.43	0.25	
Control Delay	4.4	4.4			7.9	0.9		49.3		35.4	9.0	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	4.4	4.4			7.9	0.9		49.3		35.4	9.0	
LOS	A	A			A	A		D		D	A	
Approach Delay		4.4			5.3			49.3			23.9	
Approach LOS		A			A			D			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 32 (29%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 8.9	Intersection LOS: A
Intersection Capacity Utilization 54.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85		1.00		1.00	0.88	
Flt Protected	0.95	1.00			1.00	1.00		0.98		0.95	1.00	
Satd. Flow (prot)	1770	3513			3539	1583		1828		1770	1630	
Flt Permitted	0.34	1.00			0.95	1.00		0.87		0.52	1.00	
Satd. Flow (perm)	642	3513			3378	1583		1618		968	1630	
Volume (vph)	40	591	31	1	588	351	20	43	2	138	18	89
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	657	34	1	653	390	22	48	2	153	20	99
RTOR Reduction (vph)	0	3	0	0	0	142	0	1	0	0	74	0
Lane Group Flow (vph)	44	688	0	0	654	248	0	71	0	153	45	0
Turn Type	pm+pt			Perm		Perm	Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6		6	4			8		
Actuated Green, G (s)	74.0	74.0			65.1	65.1		8.4		26.0	26.0	
Effective Green, g (s)	76.0	76.0			67.1	67.1		10.4		28.0	28.0	
Actuated g/C Ratio	0.69	0.69			0.61	0.61		0.09		0.25	0.25	
Clearance Time (s)	5.0	5.0			5.0	5.0		5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	504	2427			2061	966		153		353	415	
v/s Ratio Prot	0.00	c0.20								c0.06	0.03	
v/s Ratio Perm	0.06				c0.19	0.16		0.04		c0.05		
v/c Ratio	0.09	0.28			0.32	0.26		0.46		0.43	0.11	
Uniform Delay, d1	5.9	6.5			10.4	9.9		47.2		33.8	31.4	
Progression Factor	0.60	0.58			0.67	0.07		1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.3			0.4	0.6		2.2		0.9	0.1	
Delay (s)	3.6	4.1			7.4	1.3		49.4		34.6	31.6	
Level of Service	A	A			A	A		D		C	C	
Approach Delay (s)		4.1			5.1			49.4			33.3	
Approach LOS		A			A			D			C	

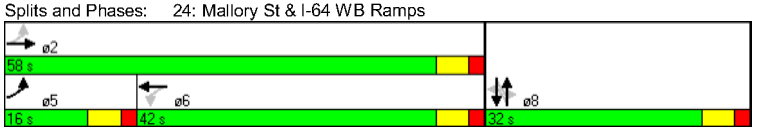
Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.923			0.995			0.994	
Flt Protected	0.950							0.992			0.960	
Satd. Flow (prot)	1770	1848	0	0	1719	0	0	1839	0	0	1778	0
Flt Permitted	0.153				0.999			0.935			0.616	
Satd. Flow (perm)	285	1848	0	0	1718	0	0	1733	0	0	1141	0
Satd. Flow (RTOR)		6			93			2			3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	73	180	11	4	344	457	21	110	5	179	28	10
Adj. Flow (vph)	81	200	12	4	382	508	23	122	6	199	31	11
Lane Group Flow (vph)	81	212	0	0	894	0	0	151	0	0	241	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Total Split (s)	16.0	58.0	0.0	42.0	42.0	0.0	32.0	32.0	0.0	32.0	32.0	0.0
Act Effct Green (s)	59.5	59.5			47.6			24.5			24.5	
Actuated g/C Ratio	0.66	0.66			0.53			0.27			0.27	
v/c Ratio	0.22	0.17			0.94			0.32			0.77	
Control Delay	8.8	9.2			40.6			25.8			38.0	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	8.8	9.2			40.6			25.8			38.0	
LOS	A	A			D			C			D	
Approach Delay		9.1			40.6			25.8			38.0	
Approach LOS		A			D			C			D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 54 (60%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 32.9 Intersection LOS: C
Intersection Capacity Utilization 81.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			0.92			0.99			0.99	
Flt Protected	0.95	1.00			1.00			0.99			0.96	
Satd. Flow (prot)	1770	1847			1719			1839			1778	
Flt Permitted	0.21	1.00			1.00			0.94			0.59	
Satd. Flow (perm)	390	1847			1718			1744			1096	
Volume (vph)	73	180	11	4	344	457	21	110	5	179	28	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	200	12	4	382	508	23	122	6	199	31	11
RTOR Reduction (vph)	0	2	0	0	45	0	0	1	0	0	2	0
Lane Group Flow (vph)	81	210	0	0	849	0	0	150	0	0	239	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Actuated Green, G (s)	56.5	56.5			43.4			21.5			21.5	
Effective Green, g (s)	59.5	59.5			46.4			24.5			24.5	
Actuated g/C Ratio	0.66	0.66			0.52			0.27			0.27	
Clearance Time (s)	6.0	6.0			6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	413	1221			886			475			298	
v/s Ratio Prot	c0.02	0.11										
v/s Ratio Perm	0.11				c0.49			0.09			c0.22	
v/c Ratio	0.20	0.17			0.96			0.31			0.80	
Uniform Delay, d1	9.1	5.8			20.9			26.1			30.5	
Progression Factor	1.17	1.34			1.07			1.00			1.00	
Incremental Delay, d2	0.2	0.3			20.9			0.4			14.3	
Delay (s)	10.9	8.1			43.2			26.5			44.8	
Level of Service	B	A			D			C			D	
Approach Delay (s)		8.9			43.2			26.5			44.8	
Approach LOS		A			D			C			D	

Intersection Summary

HCM Average Control Delay	35.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

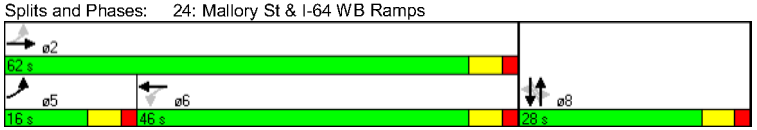
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.931			0.995			0.994	
Flt Protected	0.950							0.992			0.960	
Satd. Flow (prot)	1770	1850	0	0	1734	0	0	1839	0	0	1778	0
Flt Permitted	0.159				0.999			0.941			0.595	
Satd. Flow (perm)	296	1850	0	0	1732	0	0	1744	0	0	1102	0
Satd. Flow (RTOR)		6			80			2			3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	73	226	11	4	432	457	21	110	5	179	28	10
Adj. Flow (vph)	81	251	12	4	480	508	23	122	6	199	31	11
Lane Group Flow (vph)	81	263	0	0	992	0	0	151	0	0	241	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Total Split (s)	16.0	62.0	0.0	46.0	46.0	0.0	28.0	28.0	0.0	28.0	28.0	0.0
Act Effct Green (s)	60.5	60.5			50.4			23.5			23.5	
Actuated g/C Ratio	0.67	0.67			0.56			0.26			0.26	
v/c Ratio	0.23	0.21			0.99			0.33			0.83	
Control Delay	2.2	1.7			41.4			27.9			49.9	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	2.2	1.7			41.4			27.9			49.9	
LOS	A	A			D			C			D	
Approach Delay		1.8			41.4			27.9			49.9	
Approach LOS		A			D			C			D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 45 (50%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 33.5 Intersection LOS: C
Intersection Capacity Utilization 82.2% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			0.93			0.99			0.99	
Flt Protected	0.95	1.00			1.00			0.99			0.96	
Satd. Flow (prot)	1770	1850			1734			1839			1778	
Flt Permitted	0.20	1.00			1.00			0.94			0.59	
Satd. Flow (perm)	371	1850			1732			1746			1084	
Volume (vph)	73	226	11	4	432	457	21	110	5	179	28	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	251	12	4	480	508	23	122	6	199	31	11
RTOR Reduction (vph)	0	2	0	0	36	0	0	1	0	0	2	0
Lane Group Flow (vph)	81	261	0	0	956	0	0	150	0	0	239	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Actuated Green, G (s)	57.5	57.5			46.2			20.5			20.5	
Effective Green, g (s)	60.5	60.5			49.2			23.5			23.5	
Actuated g/C Ratio	0.67	0.67			0.55			0.26			0.26	
Clearance Time (s)	6.0	6.0			6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	378	1244			947			456			283	
v/s Ratio Prot	0.02	c0.14										
v/s Ratio Perm	0.12				c0.55			0.09			c0.22	
v/c Ratio	0.21	0.21			1.01			0.33			0.84	
Uniform Delay, d1	8.9	5.6			20.4			26.9			31.5	
Progression Factor	0.24	0.23			0.74			1.00			1.00	
Incremental Delay, d2	0.2	0.3			29.8			0.4			19.9	
Delay (s)	2.4	1.6			44.9			27.3			51.4	
Level of Service	A	A			D			C			D	
Approach Delay (s)		1.8			44.9			27.3			51.4	
Approach LOS		A			D			C			D	

Intersection Summary

HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

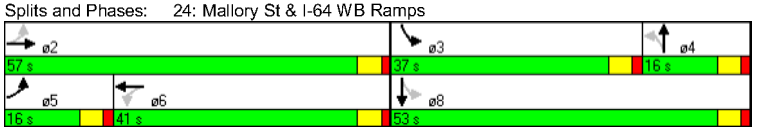
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.942			0.995			0.998	
Flt Protected	0.950							0.992			0.955	
Satd. Flow (prot)	1770	1853	0	0	1755	0	0	1839	0	0	1775	0
Flt Permitted	0.098				0.999			0.841			0.289	
Satd. Flow (perm)	183	1853	0	0	1753	0	0	1559	0	0	537	0
Satd. Flow (RTOR)		2			37			2			1	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	73	287	11	4	675	504	21	110	5	529	28	10
Adj. Flow (vph)	81	319	12	4	750	560	23	122	6	588	31	11
Lane Group Flow (vph)	81	331	0	0	1314	0	0	151	0	0	630	0
Turn Type	pm+pt			Perm			Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6			4			8		
Total Split (s)	16.0	57.0	0.0	41.0	41.0	0.0	16.0	16.0	0.0	37.0	53.0	0.0
Act Effct Green (s)	54.0	54.0			44.6			50.0			50.0	
Actuated g/C Ratio	0.49	0.49			0.41			0.45			0.45	
v/c Ratio	0.38	0.36			1.80			0.21			2.57	
Control Delay	10.8	3.8			383.1			18.9			737.8	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	10.8	3.8			383.1			18.9			737.8	
LOS	B	A			F			B			F	
Approach Delay		5.2			383.1			18.9			737.8	
Approach LOS		A			F			B			F	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 65 (59%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.57
Intersection Signal Delay: 388.2 Intersection LOS: F
Intersection Capacity Utilization 114.4% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			0.94			0.99			1.00	
Flt Protected	0.95	1.00			1.00			0.99			0.96	
Satd. Flow (prot)	1770	1853			1755			1839			1775	
Flt Permitted	0.09	1.00			1.00			0.89			0.62	
Satd. Flow (perm)	160	1853			1754			1648			1144	
Volume (vph)	73	287	11	4	675	504	21	110	5	529	28	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	319	12	4	750	560	23	122	6	588	31	11
RTOR Reduction (vph)	0	1	0	0	22	0	0	1	0	0	1	0
Lane Group Flow (vph)	81	330	0	0	1292	0	0	150	0	0	629	0
Turn Type	pm+pt			Perm			Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	52.0	52.0			41.6			48.0			48.0	
Effective Green, g (s)	54.0	54.0			43.6			50.0			50.0	
Actuated g/C Ratio	0.49	0.49			0.40			0.45			0.45	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	187	910			695			749			520	
v/s Ratio Prot	c0.03	0.18										
v/s Ratio Perm	0.18				c0.74			0.09			c0.55	
v/c Ratio	0.43	0.36			1.86			0.20			1.21	
Uniform Delay, d1	24.8	17.3			33.2			18.0			30.0	
Progression Factor	0.57	0.17			1.05			1.00			1.00	
Incremental Delay, d2	1.3	0.9			386.8			0.1			111.6	
Delay (s)	15.5	3.8			421.7			18.1			141.6	
Level of Service	B	A			F			B			F	
Approach Delay (s)		6.1			421.7			18.1			141.6	
Approach LOS		A			F			B			F	

Intersection Summary

HCM Average Control Delay	258.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		

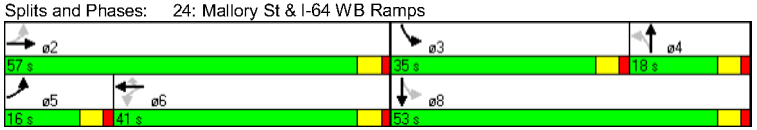
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995				0.850		0.995			0.961	
Flt Protected	0.950							0.992		0.950		
Satd. Flow (prot)	1770	3522	0	0	3539	1583	0	1839	0	1770	1790	0
Flt Permitted	0.184				0.953			0.952		0.333		
Satd. Flow (perm)	343	3522	0	0	3373	1583	0	1764	0	620	1790	0
Satd. Flow (RTOR)		5				353		2			11	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	73	287	11	4	675	504	21	110	5	529	28	10
Adj. Flow (vph)	81	319	12	4	750	560	23	122	6	588	31	11
Lane Group Flow (vph)	81	331	0	0	754	560	0	151	0	588	42	0
Turn Type	pm+pt			Perm		Perm	Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6		6	4			8		
Total Split (s)	16.0	57.0	0.0	41.0	41.0	41.0	18.0	18.0	0.0	35.0	53.0	0.0
Act Effct Green (s)	55.0	55.0			46.0	46.0		14.0		49.0	49.0	
Actuated g/C Ratio	0.50	0.50			0.42	0.42		0.13		0.45	0.45	
v/c Ratio	0.29	0.19			0.53	0.65		0.67		0.96	0.05	
Control Delay	3.3	1.8			24.0	13.7		56.9		55.2	13.6	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	3.3	1.8			24.0	13.7		56.9		55.2	13.6	
LOS	A	A			C	B		E		E	B	
Approach Delay		2.1			19.6			56.9			52.5	
Approach LOS		A			B			E			D	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 26 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 27.2 Intersection LOS: C
Intersection Capacity Utilization 73.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85		0.99		1.00	0.96	
Flt Protected	0.95	1.00			1.00	1.00		0.99		0.95	1.00	
Satd. Flow (prot)	1770	3520			3538	1583		1839		1770	1790	
Flt Permitted	0.23	1.00			0.95	1.00		0.95		0.31	1.00	
Satd. Flow (perm)	420	3520			3375	1583		1762		575	1790	
Volume (vph)	73	287	11	4	675	504	21	110	5	529	28	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	319	12	4	750	560	23	122	6	588	31	11
RTOR Reduction (vph)	0	3	0	0	0	209	0	2	0	0	6	0
Lane Group Flow (vph)	81	329	0	0	754	351	0	149	0	588	36	0
Turn Type	pm+pt			Perm		Perm	Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6		6	4			8		
Actuated Green, G (s)	53.0	53.0			43.0	43.0		12.0		47.0	47.0	
Effective Green, g (s)	55.0	55.0			45.0	45.0		14.0		49.0	49.0	
Actuated g/C Ratio	0.50	0.50			0.41	0.41		0.13		0.45	0.45	
Clearance Time (s)	5.0	5.0			5.0	5.0		5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	296	1760			1381	648		224		604	797	
v/s Ratio Prot	c0.02	0.09								c0.28	0.02	
v/s Ratio Perm	0.12				c0.22	0.22		0.08		c0.15		
v/c Ratio	0.27	0.19			0.55	0.54		0.67		0.97	0.05	
Uniform Delay, d1	16.2	15.2			24.7	24.7		45.8		26.7	17.3	
Progression Factor	0.12	0.11			0.90	1.09		1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.2			1.3	2.7		7.3		29.8	0.0	
Delay (s)	2.4	1.8			23.6	29.6		53.1		56.5	17.3	
Level of Service	A	A			C	C		D		E	B	
Approach Delay (s)		1.9			26.2			53.1			53.9	
Approach LOS		A			C			D			D	

Intersection Summary

HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

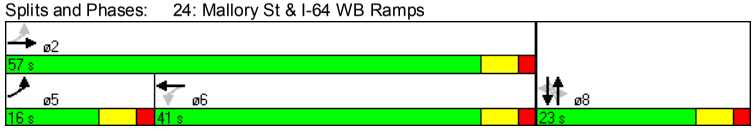
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.916			0.991			0.951	
Flt Protected	0.950							0.986			0.972	
Satd. Flow (prot)	1770	1850	0	0	1706	0	0	1820	0	0	1722	0
Flt Permitted	0.391				0.999			0.906			0.822	
Satd. Flow (perm)	728	1850	0	0	1705	0	0	1672	0	0	1456	0
Satd. Flow (RTOR)		7			139			4			34	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	47	172	8	2	144	237	14	34	4	100	9	62
Adj. Flow (vph)	52	191	9	2	160	263	16	38	4	111	10	69
Lane Group Flow (vph)	52	200	0	0	425	0	0	58	0	0	190	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Total Split (s)	16.0	57.0	0.0	41.0	41.0	0.0	23.0	23.0	0.0	23.0	23.0	0.0
Act Effct Green (s)	57.9	57.9			49.6			16.1			16.1	
Actuated g/C Ratio	0.72	0.72			0.62			0.20			0.20	
v/c Ratio	0.08	0.15			0.38			0.17			0.59	
Control Delay	4.1	5.3			6.5			24.2			27.3	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	4.1	5.3			6.5			24.2			27.3	
LOS	A	A			A			C			C	
Approach Delay		5.1			6.5			24.2			27.3	
Approach LOS		A			A			C			C	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 21 (26%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 58.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			0.92			0.99			0.95	
Flt Protected	0.95	1.00			1.00			0.99			0.97	
Satd. Flow (prot)	1770	1850			1707			1820			1721	
Flt Permitted	0.45	1.00			1.00			0.91			0.82	
Satd. Flow (perm)	830	1850			1706			1681			1449	
Volume (vph)	47	172	8	2	144	237	14	34	4	100	9	62
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	191	9	2	160	263	16	38	4	111	10	69
RTOR Reduction (vph)	0	2	0	0	57	0	0	3	0	0	27	0
Lane Group Flow (vph)	52	198	0	0	368	0	0	55	0	0	163	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Actuated Green, G (s)	54.9	54.9			44.1			13.1			13.1	
Effective Green, g (s)	57.9	57.9			47.1			16.1			16.1	
Actuated g/C Ratio	0.72	0.72			0.59			0.20			0.20	
Clearance Time (s)	6.0	6.0			6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	692	1339			1004			338			292	
v/s Ratio Prot	0.01	c0.11										
v/s Ratio Perm	0.05				c0.22			0.03			c0.11	
v/c Ratio	0.08	0.15			0.37			0.16			0.56	
Uniform Delay, d1	3.9	3.4			8.6			26.4			28.7	
Progression Factor	0.99	1.29			0.79			1.00			1.00	
Incremental Delay, d2	0.0	0.2			1.0			0.2			2.3	
Delay (s)	3.9	4.6			7.8			26.6			31.1	
Level of Service	A	A			A			C			C	
Approach Delay (s)		4.5			7.8			26.6			31.1	
Approach LOS		A			A			C			C	

Intersection Summary

HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

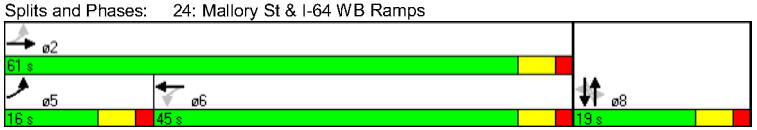
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.924			0.991			0.951	
Flt Protected	0.950							0.986			0.972	
Satd. Flow (prot)	1770	1853	0	0	1721	0	0	1820	0	0	1722	0
Flt Permitted	0.394				0.999			0.910			0.818	
Satd. Flow (perm)	734	1853	0	0	1719	0	0	1680	0	0	1449	0
Satd. Flow (RTOR)		6			123			4			32	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	47	216	8	2	181	237	14	34	4	100	9	62
Adj. Flow (vph)	52	240	9	2	201	263	16	38	4	111	10	69
Lane Group Flow (vph)	52	249	0	0	466	0	0	58	0	0	190	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Total Split (s)	16.0	61.0	0.0	45.0	45.0	0.0	19.0	19.0	0.0	19.0	19.0	0.0
Act Effct Green (s)	59.5	59.5			52.4			14.5			14.5	
Actuated g/C Ratio	0.74	0.74			0.66			0.18			0.18	
v/c Ratio	0.08	0.18			0.40			0.19			0.66	
Control Delay	1.2	1.2			7.0			26.8			33.5	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	1.2	1.2			7.0			26.8			33.5	
LOS	A	A			A			C			C	
Approach Delay		1.2			7.0			26.8			33.5	
Approach LOS		A			A			C			C	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 77 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 11.4 Intersection LOS: B
Intersection Capacity Utilization 59.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			0.92			0.99			0.95	
Flt Protected	0.95	1.00			1.00			0.99			0.97	
Satd. Flow (prot)	1770	1853			1720			1820			1721	
Flt Permitted	0.44	1.00			1.00			0.90			0.82	
Satd. Flow (perm)	813	1853			1720			1664			1451	
Volume (vph)	47	216	8	2	181	237	14	34	4	100	9	62
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	240	9	2	201	263	16	38	4	111	10	69
RTOR Reduction (vph)	0	2	0	0	46	0	0	3	0	0	26	0
Lane Group Flow (vph)	52	247	0	0	420	0	0	55	0	0	164	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			8	
Permitted Phases	2			6			8			8		
Actuated Green, G (s)	56.5	56.5			47.0			11.5			11.5	
Effective Green, g (s)	59.5	59.5			50.0			14.5			14.5	
Actuated g/C Ratio	0.74	0.74			0.62			0.18			0.18	
Clearance Time (s)	6.0	6.0			6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	682	1378			1075			302			263	
v/s Ratio Prot	0.01	c0.13										
v/s Ratio Perm	0.05				0.24			0.03			c0.11	
v/c Ratio	0.08	0.18			0.39			0.18			0.62	
Uniform Delay, d1	3.4	3.0			7.4			27.7			30.2	
Progression Factor	0.33	0.29			1.00			1.00			1.00	
Incremental Delay, d2	0.0	0.3			1.0			0.3			4.5	
Delay (s)	1.2	1.1			8.5			28.0			34.8	
Level of Service	A	A			A			C			C	
Approach Delay (s)		1.1			8.5			28.0			34.8	
Approach LOS		A			A			C			C	

Intersection Summary

HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

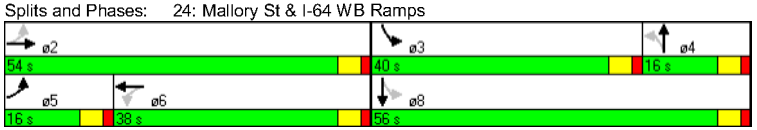
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.953			0.991			0.987	
Flt Protected	0.950							0.986			0.958	
Satd. Flow (prot)	1770	1855	0	0	1775	0	0	1820	0	0	1761	0
Flt Permitted	0.105				0.999			0.756			0.600	
Satd. Flow (perm)	196	1855	0	0	1773	0	0	1396	0	0	1103	0
Satd. Flow (RTOR)		2			26			3			7	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	47	310	8	2	611	326	14	34	4	551	9	62
Adj. Flow (vph)	52	344	9	2	679	362	16	38	4	612	10	69
Lane Group Flow (vph)	52	353	0	0	1043	0	0	58	0	0	691	0
Turn Type	pm+pt			Perm			Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6			4			8		
Total Split (s)	16.0	54.0	0.0	38.0	38.0	0.0	16.0	16.0	0.0	40.0	56.0	0.0
Act Effct Green (s)	51.0	51.0			44.4			53.0			53.0	
Actuated g/C Ratio	0.46	0.46			0.40			0.48			0.48	
v/c Ratio	0.26	0.41			1.43			0.09			1.29	
Control Delay	3.3	3.0			221.8			15.2			172.1	
Queue Delay	0.0	0.0			13.4			0.0			0.0	
Total Delay	3.3	3.0			235.2			15.2			172.1	
LOS	A	A			F			B			F	
Approach Delay		3.0			235.2			15.2			172.1	
Approach LOS		A			F			B			F	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 56 (51%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.43
Intersection Signal Delay: 166.7 Intersection LOS: F
Intersection Capacity Utilization 101.8% ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.95			0.99			0.99	
Flt Protected	0.95	1.00			1.00			0.99			0.96	
Satd. Flow (prot)	1770	1856			1775			1820			1760	
Flt Permitted	0.09	1.00			1.00			0.84			0.73	
Satd. Flow (perm)	164	1856			1775			1542			1338	
Volume (vph)	47	310	8	2	611	326	14	34	4	551	9	62
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	344	9	2	679	362	16	38	4	612	10	69
RTOR Reduction (vph)	0	1	0	0	16	0	0	2	0	0	4	0
Lane Group Flow (vph)	52	352	0	0	1027	0	0	56	0	0	687	0
Turn Type	pm+pt			Perm			Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	49.0	49.0			40.4			51.0			51.0	
Effective Green, g (s)	51.0	51.0			42.4			53.0			53.0	
Actuated g/C Ratio	0.46	0.46			0.39			0.48			0.48	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	158	861			684			743			645	
v/s Ratio Prot	0.02	c0.19										
v/s Ratio Perm	0.14				0.58			0.04			c0.51	
v/c Ratio	0.33	0.41			1.50			0.08			1.07	
Uniform Delay, d1	24.3	19.5			33.8			15.3			28.5	
Progression Factor	0.12	0.09			1.08			1.00			1.00	
Incremental Delay, d2	1.0	1.2			226.4			0.0			54.2	
Delay (s)	4.0	2.9			262.8			15.4			82.7	
Level of Service	A	A			F			B			F	
Approach Delay (s)		3.1			262.8			15.4			82.7	
Approach LOS		A			F			B			F	

Intersection Summary

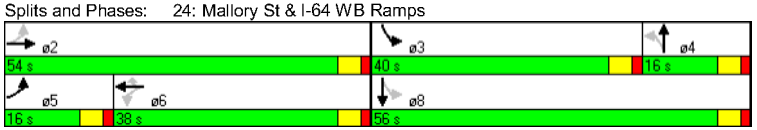
HCM Average Control Delay	151.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850		0.991			0.869	
Flt Protected	0.950							0.986		0.950		
Satd. Flow (prot)	1770	3525	0	0	3539	1583	0	1820	0	1770	1619	0
Flt Permitted	0.200				0.954			0.911		0.593		
Satd. Flow (perm)	373	3525	0	0	3376	1583	0	1682	0	1105	1619	0
Satd. Flow (RTOR)		3				243		3			69	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	47	310	8	2	611	326	14	34	4	551	9	62
Adj. Flow (vph)	52	344	9	2	679	362	16	38	4	612	10	69
Lane Group Flow (vph)	52	353	0	0	681	362	0	58	0	612	79	0
Turn Type	pm+pt			Perm		Perm	Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6		6	4			8		
Total Split (s)	16.0	54.0	0.0	38.0	38.0	38.0	16.0	16.0	0.0	40.0	56.0	0.0
Act Effct Green (s)	56.3	56.3			47.8	47.8		10.6		47.7	47.7	
Actuated g/C Ratio	0.51	0.51			0.43	0.43		0.10		0.43	0.43	
v/c Ratio	0.18	0.20			0.46	0.44		0.35		0.88	0.11	
Control Delay	2.5	2.0			22.4	10.8		47.2		39.9	5.0	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	2.5	2.0			22.4	10.8		47.2		39.9	5.0	
LOS	A	A			C	B		D		D	A	
Approach Delay		2.1			18.4			47.2			35.9	
Approach LOS		A			B			D			D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 53 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 73.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 24: Mallory St & I-64 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00		1.00	1.00	
Frt	1.00	1.00			1.00	0.85		0.99		1.00	0.87	
Flt Protected	0.95	1.00			1.00	1.00		0.99		0.95	1.00	
Satd. Flow (prot)	1770	3526			3539	1583		1820		1770	1619	
Flt Permitted	0.26	1.00			0.95	1.00		0.90		0.55	1.00	
Satd. Flow (perm)	493	3526			3378	1583		1654		1019	1619	
Volume (vph)	47	310	8	2	611	326	14	34	4	551	9	62
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	344	9	2	679	362	16	38	4	612	10	69
RTOR Reduction (vph)	0	1	0	0	0	142	0	3	0	0	39	0
Lane Group Flow (vph)	52	352	0	0	681	220	0	55	0	612	40	0
Turn Type	pm+pt			Perm		Perm	Perm			pm+pt		
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2			6		6	4			8		
Actuated Green, G (s)	53.4	53.4			43.9	43.9		7.5		46.6	46.6	
Effective Green, g (s)	55.4	55.4			45.9	45.9		9.5		48.6	48.6	
Actuated g/C Ratio	0.50	0.50			0.42	0.42		0.09		0.44	0.44	
Clearance Time (s)	5.0	5.0			5.0	5.0		5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	324	1776			1410	661		143		697	715	
v/s Ratio Prot	0.01	c0.10								c0.29	0.03	
v/s Ratio Perm	0.07				c0.20	0.14		0.03		c0.10		
v/c Ratio	0.16	0.20			0.48	0.33		0.39		0.88	0.06	
Uniform Delay, d1	15.2	15.1			23.4	21.7		47.5		26.5	17.6	
Progression Factor	0.11	0.11			0.88	1.11		1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.2			0.9	1.1		1.7		12.1	0.0	
Delay (s)	1.9	1.9			21.6	25.1		49.2		38.6	17.6	
Level of Service	A	A			C	C		D		D	B	
Approach Delay (s)		1.9			22.8			49.2			36.2	
Approach LOS		A			C			D			D	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Traffic Analysis

Mallory Street/Mellen Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.898			0.998			0.979			0.987	
Flt Protected					0.998			0.964				
Satd. Flow (prot)	0	1505	0	0	1670	0	0	1758	0	0	1839	0
Flt Permitted					0.987			0.783				
Satd. Flow (perm)	0	1505	0	0	1651	0	0	1428	0	0	1839	0
Satd. Flow (RTOR)		255			3			9			4	
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1	144	441	14	451	8	50	7	11	0	33	4
Adj. Flow (vph)	1	160	490	16	501	9	56	8	12	0	37	4
Lane Group Flow (vph)	0	651	0	0	526	0	0	76	0	0	41	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	50.0	50.0	0.0	20.0	70.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0
Act Effct Green (s)		74.4			74.4			12.5			12.5	
Actuated g/C Ratio		0.83			0.83			0.14			0.14	
v/c Ratio		0.51			0.39			0.37			0.16	
Control Delay		2.1			2.6			32.1			30.8	
Queue Delay		0.0			0.2			0.0			0.0	
Total Delay		2.1			2.8			32.1			30.8	
LOS		A			A			C			C	
Approach Delay		2.1			2.8			32.1			30.8	
Approach LOS		A			A			C			C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 84 (93%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 52.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 48: Mallory St & Mellen St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.90			1.00			0.98			0.99	
Flt Protected		1.00			1.00			0.96			1.00	
Satd. Flow (prot)		1506			1670			1758			1838	
Flt Permitted		1.00			0.98			0.76			1.00	
Satd. Flow (perm)		1506			1636			1379			1838	
Volume (vph)	1	144	441	14	451	8	50	7	11	0	33	4
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	160	490	16	501	9	56	8	12	0	37	4
RTOR Reduction (vph)	0	49	0	0	1	0	0	8	0	0	3	0
Lane Group Flow (vph)	0	602	0	0	525	0	0	68	0	0	38	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		69.6			69.6			8.4			8.4	
Effective Green, g (s)		72.6			72.6			11.4			11.4	
Actuated g/C Ratio		0.81			0.81			0.13			0.13	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1215			1320			175			233	
v/s Ratio Prot											0.02	
v/s Ratio Perm		0.40			0.32			c0.05				
v/c Ratio		0.50			0.40			0.39			0.16	
Uniform Delay, d1		2.8			2.5			36.1			35.0	
Progression Factor		0.36			0.60			0.98			1.00	
Incremental Delay, d2		1.3			0.2			1.4			0.3	
Delay (s)		2.3			1.7			36.7			35.4	
Level of Service		A			A			D			D	
Approach Delay (s)		2.3			1.7			36.7			35.4	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	5.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.904			0.998			0.979			0.987	
Flt Protected					0.999			0.964				
Satd. Flow (prot)	0	1516	0	0	1671	0	0	1758	0	0	1839	0
Flt Permitted					0.989			0.783				
Satd. Flow (perm)	0	1516	0	0	1655	0	0	1428	0	0	1839	0
Satd. Flow (RTOR)		203			2			9			4	
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1	181	441	14	567	8	50	7	11	0	33	4
Adj. Flow (vph)	1	201	490	16	630	9	56	8	12	0	37	4
Lane Group Flow (vph)	0	692	0	0	655	0	0	76	0	0	41	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	50.0	50.0	0.0	20.0	70.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0
Act Effct Green (s)		74.4			74.4			12.5			12.5	
Actuated g/C Ratio		0.83			0.83			0.14			0.14	
v/c Ratio		0.54			0.48			0.37			0.16	
Control Delay		3.1			2.0			31.6			30.8	
Queue Delay		0.0			0.2			0.0			0.0	
Total Delay		3.1			2.2			31.6			30.8	
LOS		A			A			C			C	
Approach Delay		3.1			2.2			31.6			30.8	
Approach LOS		A			A			C			C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 27 (30%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 4.9	Intersection LOS: A
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 48: Mallory St & Mellen St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.90			1.00			0.98			0.99	
Flt Protected		1.00			1.00			0.96			1.00	
Satd. Flow (prot)		1516			1671			1758			1838	
Flt Permitted		1.00			0.98			0.76			1.00	
Satd. Flow (perm)		1516			1642			1379			1838	
Volume (vph)	1	181	441	14	567	8	50	7	11	0	33	4
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	201	490	16	630	9	56	8	12	0	37	4
RTOR Reduction (vph)	0	39	0	0	0	0	0	8	0	0	3	0
Lane Group Flow (vph)	0	653	0	0	655	0	0	68	0	0	38	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		69.6			69.6			8.4			8.4	
Effective Green, g (s)		72.6			72.6			11.4			11.4	
Actuated g/C Ratio		0.81			0.81			0.13			0.13	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1223			1325			175			233	
v/s Ratio Prot											0.02	
v/s Ratio Perm		0.43			0.40			c0.05				
v/c Ratio		0.53			0.49			0.39			0.16	
Uniform Delay, d1		3.0			2.8			36.1			35.0	
Progression Factor		0.66			0.27			0.96			1.00	
Incremental Delay, d2		1.4			0.3			1.4			0.3	
Delay (s)		3.4			1.0			36.1			35.4	
Level of Service		A			A			D			D	
Approach Delay (s)		3.4			1.0			36.1			35.4	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	4.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.906			0.998			0.982			0.987	
Flt Protected								0.960				
Satd. Flow (prot)	0	1519	0	0	1673	0	0	1756	0	0	1839	0
Flt Permitted								0.732				
Satd. Flow (perm)	0	1519	0	0	1673	0	0	1339	0	0	1839	0
Satd. Flow (RTOR)		149			1			7			4	
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1	179	409	0	578	8	227	7	37	0	33	4
Adj. Flow (vph)	1	199	454	0	642	9	252	8	41	0	37	4
Lane Group Flow (vph)	0	654	0	0	651	0	0	301	0	0	41	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	58.0	58.0	0.0	16.0	74.0	0.0	36.0	36.0	0.0	36.0	36.0	0.0
Act Effct Green (s)		75.1			75.1			28.9			28.9	
Actuated g/C Ratio		0.68			0.68			0.26			0.26	
v/c Ratio		0.60			0.57			0.84			0.08	
Control Delay		4.7			9.2			48.7			26.6	
Queue Delay		0.0			0.4			0.0			0.0	
Total Delay		4.7			9.6			48.7			26.6	
LOS		A			A			D			C	
Approach Delay		4.7			9.6			48.7			26.6	
Approach LOS		A			A			D			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 38 (35%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 15.2	Intersection LOS: B
Intersection Capacity Utilization 64.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 48: Mallory St & Mellen St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.91			1.00			0.98			0.99	
Flt Protected		1.00			1.00			0.96			1.00	
Satd. Flow (prot)		1519			1673			1755			1838	
Flt Permitted		1.00			1.00			0.73			1.00	
Satd. Flow (perm)		1519			1673			1339			1838	
Volume (vph)	1	179	409	0	578	8	227	7	37	0	33	4
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	199	454	0	642	9	252	8	41	0	37	4
RTOR Reduction (vph)	0	47	0	0	0	0	0	5	0	0	3	0
Lane Group Flow (vph)	0	607	0	0	651	0	0	296	0	0	38	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		73.1			73.1			26.9			26.9	
Effective Green, g (s)		75.1			75.1			28.9			28.9	
Actuated g/C Ratio		0.68			0.68			0.26			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1037			1142			352			483	
v/s Ratio Prot					0.39						0.02	
v/s Ratio Perm		0.40						c0.22				
v/c Ratio		0.59			0.57			0.84			0.08	
Uniform Delay, d1		9.2			9.1			38.4			30.5	
Progression Factor		0.32			0.72			1.00			1.00	
Incremental Delay, d2		2.1			1.8			16.3			0.1	
Delay (s)		5.0			8.3			54.7			30.6	
Level of Service		A			A			D			C	
Approach Delay (s)		5.0			8.3			54.7			30.6	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.896			0.998			0.958			0.987	
Flt Protected							0.950	0.968				
Satd. Flow (prot)	0	3013	0	0	3356	0	1681	1641	0	0	1839	0
Flt Permitted		0.955					0.950	0.968				
Satd. Flow (perm)	0	2877	0	0	3356	0	1681	1641	0	0	1839	0
Satd. Flow (RTOR)		454			2			16			4	
Headway Factor	1.00	1.07	1.00	1.00	1.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1	179	409	0	578	8	227	7	37	0	33	4
Adj. Flow (vph)	1	199	454	0	642	9	252	8	41	0	37	4
Lane Group Flow (vph)	0	654	0	0	651	0	154	147	0	0	41	0
Turn Type	Perm			pm+pt			Split			Perm		
Protected Phases		2		1	6		8	8			4	
Permitted Phases	2			6						4		
Total Split (s)	50.0	50.0	0.0	16.0	66.0	0.0	28.0	28.0	0.0	16.0	16.0	0.0
Act Effct Green (s)		79.0			79.0		16.7	16.7			9.6	
Actuated g/C Ratio		0.72			0.72		0.15	0.15			0.09	
v/c Ratio		0.30			0.27		0.60	0.56			0.25	
Control Delay		1.1			4.8		45.7	40.2			44.5	
Queue Delay		0.0			0.2		0.0	0.0			0.0	
Total Delay		1.1			4.9		45.7	40.2			44.5	
LOS		A			A		D	D			D	
Approach Delay		1.1			4.9			43.0			44.5	
Approach LOS		A			A			D			D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 40 (36%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 39.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 48: Mallory St & Mellen St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0		3.0	3.0			3.0	
Lane Util. Factor		0.95			0.95		0.95	0.95			1.00	
Frt		0.90			1.00		1.00	0.96			0.99	
Flt Protected		1.00			1.00		0.95	0.97			1.00	
Satd. Flow (prot)		3012			3355		1681	1641			1838	
Flt Permitted		0.95			1.00		0.95	0.97			1.00	
Satd. Flow (perm)		2876			3355		1681	1641			1838	
Volume (vph)	1	179	409	0	578	8	227	7	37	0	33	4
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	199	454	0	642	9	252	8	41	0	37	4
RTOR Reduction (vph)	0	136	0	0	1	0	0	14	0	0	4	0
Lane Group Flow (vph)	0	518	0	0	650	0	154	133	0	0	37	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Split			Perm		
Protected Phases		2		1	6		8	8			4	
Permitted Phases	2			6						4		
Actuated Green, G (s)		75.0			75.0		14.7	14.7			5.3	
Effective Green, g (s)		77.0			77.0		16.7	16.7			7.3	
Actuated g/C Ratio		0.70			0.70		0.15	0.15			0.07	
Clearance Time (s)		5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		2013			2349		255	249			122	
v/s Ratio Prot					c0.19		c0.09	0.08			c0.02	
v/s Ratio Perm		0.18										
v/c Ratio		0.26			0.28		0.60	0.54			0.31	
Uniform Delay, d1		6.0			6.1		43.6	43.1			48.9	
Progression Factor		0.35			0.65		1.00	1.00			1.00	
Incremental Delay, d2		0.3			0.3		4.0	2.2			1.4	
Delay (s)		2.4			4.3		47.4	45.1			50.4	
Level of Service		A			A		D	D			D	
Approach Delay (s)		2.4			4.3			46.3			50.4	
Approach LOS		A			A			D			D	

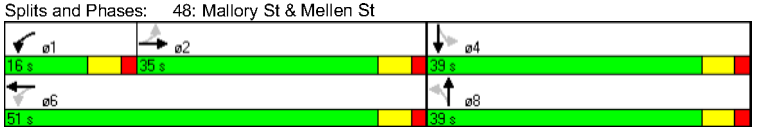
Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.956			0.994			0.989			0.955	
Flt Protected					0.993			0.958			0.992	
Satd. Flow (prot)	0	1603	0	0	1655	0	0	1765	0	0	1765	0
Flt Permitted		0.999			0.896			0.744			0.934	
Satd. Flow (perm)	0	1601	0	0	1493	0	0	1371	0	0	1662	0
Satd. Flow (RTOR)		30			4			6			18	
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2	263	128	49	282	16	320	18	29	8	24	16
Adj. Flow (vph)	2	292	142	54	313	18	356	20	32	9	27	18
Lane Group Flow (vph)	0	436	0	0	385	0	0	408	0	0	54	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	35.0	35.0	0.0	16.0	51.0	0.0	39.0	39.0	0.0	39.0	39.0	0.0
Act Effct Green (s)		52.4			52.4			31.6			31.6	
Actuated g/C Ratio		0.58			0.58			0.35			0.35	
v/c Ratio		0.46			0.44			0.84			0.09	
Control Delay		5.1			21.5			35.2			13.1	
Queue Delay		0.0			1.5			0.0			0.0	
Total Delay		5.1			23.0			35.2			13.1	
LOS		A			C			D			B	
Approach Delay		5.1			23.0			35.2			13.1	
Approach LOS		A			C			D			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 38 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 20.4	Intersection LOS: C
Intersection Capacity Utilization 77.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 48: Mallory St & Mellen St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.99			0.99			0.95	
Flt Protected		1.00			0.99			0.96			0.99	
Satd. Flow (prot)		1602			1654			1766			1764	
Flt Permitted		1.00			0.90			0.75			0.93	
Satd. Flow (perm)		1601			1497			1377			1655	
Volume (vph)	2	263	128	49	282	16	320	18	29	8	24	16
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	292	142	54	313	18	356	20	32	9	27	18
RTOR Reduction (vph)	0	13	0	0	2	0	0	4	0	0	12	0
Lane Group Flow (vph)	0	423	0	0	383	0	0	404	0	0	42	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		49.4			49.4			28.6			28.6	
Effective Green, g (s)		52.4			52.4			31.6			31.6	
Actuated g/C Ratio		0.58			0.58			0.35			0.35	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		932			872			483			581	
v/s Ratio Prot												
v/s Ratio Perm		c0.26			0.26			c0.29			0.03	
v/c Ratio		0.45			0.44			0.84			0.07	
Uniform Delay, d1		10.7			10.6			26.8			19.4	
Progression Factor		0.32			1.67			1.01			1.00	
Incremental Delay, d2		1.5			0.3			12.0			0.1	
Delay (s)		4.9			17.9			39.1			19.5	
Level of Service		A			B			D			B	
Approach Delay (s)		4.9			17.9			39.1			19.5	
Approach LOS		A			B			D			B	

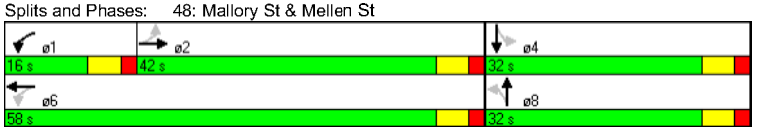
Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963			0.995			0.989			0.955	
Flt Protected					0.994			0.958			0.992	
Satd. Flow (prot)	0	1614	0	0	1658	0	0	1765	0	0	1765	0
Flt Permitted		0.999			0.920			0.748			0.933	
Satd. Flow (perm)	0	1613	0	0	1535	0	0	1378	0	0	1660	0
Satd. Flow (RTOR)		27			4			5			18	
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2	331	128	49	354	16	320	18	29	8	24	16
Adj. Flow (vph)	2	368	142	54	393	18	356	20	32	9	27	18
Lane Group Flow (vph)	0	512	0	0	465	0	0	408	0	0	54	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	42.0	42.0	0.0	16.0	58.0	0.0	32.0	32.0	0.0	32.0	32.0	0.0
Act Effct Green (s)		55.4			55.4			28.6			28.6	
Actuated g/C Ratio		0.62			0.62			0.32			0.32	
v/c Ratio		0.51			0.49			0.93			0.10	
Control Delay		6.3			10.6			56.8			16.3	
Queue Delay		0.0			0.4			0.0			0.0	
Total Delay		6.3			11.0			56.8			16.3	
LOS		A			B			E			B	
Approach Delay		6.3			11.0			56.8			16.3	
Approach LOS		A			B			E			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 44 (49%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 84.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 48: Mallory St & Mellen St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.99			0.99			0.95	
Flt Protected		1.00			0.99			0.96			0.99	
Satd. Flow (prot)		1613			1658			1766			1764	
Flt Permitted		1.00			0.90			0.75			0.94	
Satd. Flow (perm)		1612			1508			1379			1664	
Volume (vph)	2	331	128	49	354	16	320	18	29	8	24	16
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	368	142	54	393	18	356	20	32	9	27	18
RTOR Reduction (vph)	0	10	0	0	2	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	502	0	0	463	0	0	405	0	0	42	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		52.4			52.4			25.6			25.6	
Effective Green, g (s)		55.4			55.4			28.6			28.6	
Actuated g/C Ratio		0.62			0.62			0.32			0.32	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		992			928			438			529	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.31			c0.29			0.03	
v/c Ratio		0.51			0.50			0.92			0.08	
Uniform Delay, d1		9.7			9.6			29.6			21.5	
Progression Factor		0.47			0.89			1.01			1.00	
Incremental Delay, d2		1.8			0.4			25.1			0.1	
Delay (s)		6.3			9.0			54.9			21.5	
Level of Service		A			A			D			C	
Approach Delay (s)		6.3			9.0			54.9			21.5	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM Average Control Delay	21.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.921			0.996			0.982			0.955	
Flt Protected					0.988			0.960			0.992	
Satd. Flow (prot)	0	1544	0	0	1650	0	0	1756	0	0	1765	0
Flt Permitted		0.999			0.561			0.732			0.984	
Satd. Flow (perm)	0	1542	0	0	937	0	0	1339	0	0	1750	0
Satd. Flow (RTOR)		115			4			6			18	
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2	360	510	131	378	16	586	18	95	8	24	16
Adj. Flow (vph)	2	400	567	146	420	18	651	20	106	9	27	18
Lane Group Flow (vph)	0	969	0	0	584	0	0	777	0	0	54	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	69.0	69.0	0.0	16.0	85.0	0.0	25.0	25.0	0.0	25.0	25.0	0.0
Act Effct Green (s)		82.0			82.0			22.0			22.0	
Actuated g/C Ratio		0.75			0.75			0.20			0.20	
v/c Ratio		0.82			0.83			2.85			0.15	
Control Delay		7.0			24.2			859.8			27.7	
Queue Delay		0.5			0.5			0.0			0.0	
Total Delay		7.5			24.7			859.8			27.7	
LOS		A			C			F			C	
Approach Delay		7.5			24.7			859.8			27.7	
Approach LOS		A			C			F			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 71 (65%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.85	
Intersection Signal Delay: 289.9	Intersection LOS: F
Intersection Capacity Utilization 134.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 48: Mallory St & Mellen St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.92			1.00			0.98			0.95	
Flt Protected		1.00			0.99			0.96			0.99	
Satd. Flow (prot)		1544			1649			1755			1764	
Flt Permitted		1.00			0.64			0.73			0.98	
Satd. Flow (perm)		1543			1060			1338			1750	
Volume (vph)	2	360	510	131	378	16	586	18	95	8	24	16
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	400	567	146	420	18	651	20	106	9	27	18
RTOR Reduction (vph)	0	29	0	0	1	0	0	5	0	0	14	0
Lane Group Flow (vph)	0	940	0	0	583	0	0	772	0	0	40	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		80.0			80.0			20.0			20.0	
Effective Green, g (s)		82.0			82.0			22.0			22.0	
Actuated g/C Ratio		0.75			0.75			0.20			0.20	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1150			790			268			350	
v/s Ratio Prot												
v/s Ratio Perm		c0.61			0.55			c0.58			0.02	
v/c Ratio		0.82			0.74			2.88			0.11	
Uniform Delay, d1		9.1			7.9			44.0			36.0	
Progression Factor		0.70			1.21			1.00			1.00	
Incremental Delay, d2		0.6			3.4			856.8			0.1	
Delay (s)		7.0			13.0			900.8			36.2	
Level of Service		A			B			F			D	
Approach Delay (s)		7.0			13.0			900.8			36.2	
Approach LOS		A			B			F			D	

Intersection Summary			
HCM Average Control Delay	300.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	134.3%	ICU Level of Service	H
Analysis Period (min)	15		

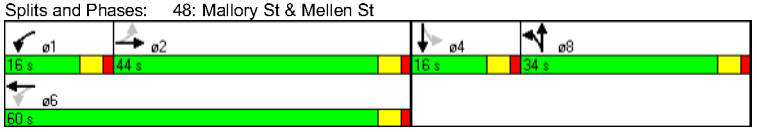
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.912			0.995			0.958			0.955	
Flt Protected					0.988		0.950	0.968			0.992	
Satd. Flow (prot)	0	3066	0	0	3305	0	1681	1641	0	0	1765	0
Flt Permitted		0.954			0.509		0.950	0.968			0.347	
Satd. Flow (perm)	0	2925	0	0	1703	0	1681	1641	0	0	617	0
Satd. Flow (RTOR)		370			4			18			18	
Headway Factor	1.00	1.07	1.00	1.00	1.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2	360	510	131	378	16	586	18	95	8	24	16
Adj. Flow (vph)	2	400	567	146	420	18	651	20	106	9	27	18
Lane Group Flow (vph)	0	969	0	0	584	0	399	378	0	0	54	0
Turn Type	Perm			pm+pt			Split			Perm		
Protected Phases		2		1	6		8	8			4	
Permitted Phases	2			6						4		
Total Split (s)	44.0	44.0	0.0	16.0	60.0	0.0	34.0	34.0	0.0	16.0	16.0	0.0
Act Effct Green (s)		61.9			61.9		29.7	29.7			11.6	
Actuated g/C Ratio		0.56			0.56		0.27	0.27			0.11	
v/c Ratio		0.54			1.36dl		0.88	0.83			0.67	
Control Delay		7.0			17.6		55.3	49.2			62.7	
Queue Delay		0.0			0.3		0.0	0.0			0.0	
Total Delay		7.0			17.9		55.3	49.2			62.7	
LOS		A			B		E	D			E	
Approach Delay		7.0			17.9			52.3			62.7	
Approach LOS		A			B			D			E	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 17 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 25.7 Intersection LOS: C
Intersection Capacity Utilization 77.5% ICU Level of Service D
Analysis Period (min) 15
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 48: Mallory St & Mellen St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0		3.0	3.0			3.0	
Lane Util. Factor		0.95			0.95		0.95	0.95			1.00	
Frt		0.91			1.00		1.00	0.96			0.95	
Flt Protected		1.00			0.99		0.95	0.97			0.99	
Satd. Flow (prot)		3067			3305		1681	1640			1764	
Flt Permitted		0.95			0.56		0.95	0.97			0.26	
Satd. Flow (perm)		2927			1858		1681	1640			468	
Volume (vph)	2	360	510	131	378	16	586	18	95	8	24	16
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	400	567	146	420	18	651	20	106	9	27	18
RTOR Reduction (vph)	0	165	0	0	2	0	0	13	0	0	16	0
Lane Group Flow (vph)	0	804	0	0	582	0	399	365	0	0	38	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Split			Perm		
Protected Phases		2		1	6		8	8			4	
Permitted Phases	2			6						4		
Actuated Green, G (s)		58.9			58.9		27.7	27.7			8.4	
Effective Green, g (s)		60.9			60.9		29.7	29.7			10.4	
Actuated g/C Ratio		0.55			0.55		0.27	0.27			0.09	
Clearance Time (s)		5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		1620			1029		454	443			44	
v/s Ratio Prot							c0.24	0.22				
v/s Ratio Perm		0.27			c0.31						c0.08	
v/c Ratio		0.50			1.36dl		0.88	0.82			0.86	
Uniform Delay, d1		15.1			16.0		38.4	37.7			49.1	
Progression Factor		0.62			0.81		1.00	1.00			1.00	
Incremental Delay, d2		0.9			0.7		17.3	11.8			81.9	
Delay (s)		10.3			13.7		55.8	49.5			131.0	
Level of Service		B			B		E	D			F	
Approach Delay (s)		10.3			13.7			52.7			131.0	
Approach LOS		B			B			D			F	

Intersection Summary

HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975			0.997			0.972			0.972	
Flt Protected		0.999			0.995			0.969			0.990	
Satd. Flow (prot)	0	1633	0	0	1663	0	0	1754	0	0	1792	0
Flt Permitted		0.996			0.966			0.826			0.960	
Satd. Flow (perm)	0	1628	0	0	1615	0	0	1496	0	0	1738	0
Satd. Flow (RTOR)		17			2			17			4	
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	4	204	48	29	252	5	65	15	21	4	10	4
Adj. Flow (vph)	4	227	53	32	280	6	72	17	23	4	11	4
Lane Group Flow (vph)	0	284	0	0	318	0	0	112	0	0	19	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	35.0	35.0	0.0	17.0	52.0	0.0	28.0	28.0	0.0	28.0	28.0	0.0
Act Effct Green (s)		63.8			63.8			13.1			13.1	
Actuated g/C Ratio		0.80			0.80			0.16			0.16	
v/c Ratio		0.22			0.25			0.43			0.07	
Control Delay		2.6			5.6			25.7			22.5	
Queue Delay		0.0			0.4			0.0			0.0	
Total Delay		2.6			6.0			25.7			22.5	
LOS		A			A			C			C	
Approach Delay		2.6			6.0			25.7			22.5	
Approach LOS		A			A			C			C	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 38 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 49.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 48: Mallory St & Mellen St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.97			1.00			0.97			0.97	
Flt Protected		1.00			0.99			0.97			0.99	
Satd. Flow (prot)		1633			1664			1755			1791	
Flt Permitted		1.00			0.95			0.79			0.95	
Satd. Flow (perm)		1629			1597			1438			1719	
Volume (vph)	4	204	48	29	252	5	65	15	21	4	10	4
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	227	53	32	280	6	72	17	23	4	11	4
RTOR Reduction (vph)	0	4	0	0	0	0	0	14	0	0	3	0
Lane Group Flow (vph)	0	280	0	0	318	0	0	98	0	0	16	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		59.0			59.0			9.0			9.0	
Effective Green, g (s)		62.0			62.0			12.0			12.0	
Actuated g/C Ratio		0.78			0.78			0.15			0.15	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1262			1238			216			258	
v/s Ratio Prot												
v/s Ratio Perm		0.17			c0.20			c0.07			0.01	
v/c Ratio		0.22			0.26			0.45			0.06	
Uniform Delay, d1		2.4			2.5			31.0			29.2	
Progression Factor		0.74			1.62			1.00			1.00	
Incremental Delay, d2		0.4			0.1			1.5			0.1	
Delay (s)		2.2			4.2			32.5			29.3	
Level of Service		A			A			C			C	
Approach Delay (s)		2.2			4.2			32.5			29.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.998			0.972			0.972	
Flt Protected		0.999			0.996			0.969			0.990	
Satd. Flow (prot)	0	1640	0	0	1666	0	0	1754	0	0	1792	0
Flt Permitted		0.996			0.966			0.796			0.939	
Satd. Flow (perm)	0	1635	0	0	1616	0	0	1441	0	0	1700	0
Satd. Flow (RTOR)		19			3			14			4	
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	4	256	48	29	317	5	65	15	21	4	10	4
Adj. Flow (vph)	4	284	53	32	352	6	72	17	23	4	11	4
Lane Group Flow (vph)	0	341	0	0	390	0	0	112	0	0	19	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	48.0	48.0	0.0	16.0	64.0	0.0	16.0	16.0	0.0	16.0	16.0	0.0
Act Effct Green (s)		65.1			65.1			11.9			11.8	
Actuated g/C Ratio		0.81			0.81			0.15			0.15	
v/c Ratio		0.26			0.30			0.50			0.07	
Control Delay		1.0			1.3			33.3			25.1	
Queue Delay		0.0			0.2			0.0			0.0	
Total Delay		1.0			1.5			33.3			25.1	
LOS		A			A			C			C	
Approach Delay		1.0			1.5			33.3			25.1	
Approach LOS		A			A			C			C	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 50 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 5.9	Intersection LOS: A
Intersection Capacity Utilization 53.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 48: Mallory St & Mellen St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			1.00			0.97			0.97	
Flt Protected		1.00			1.00			0.97			0.99	
Satd. Flow (prot)		1640			1666			1755			1791	
Flt Permitted		1.00			0.96			0.79			0.95	
Satd. Flow (perm)		1636			1603			1438			1716	
Volume (vph)	4	256	48	29	317	5	65	15	21	4	10	4
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	284	53	32	352	6	72	17	23	4	11	4
RTOR Reduction (vph)	0	4	0	0	1	0	0	12	0	0	3	0
Lane Group Flow (vph)	0	337	0	0	389	0	0	100	0	0	16	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		60.3			60.3			7.7			7.7	
Effective Green, g (s)		63.3			63.3			10.7			10.7	
Actuated g/C Ratio		0.79			0.79			0.13			0.13	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1294			1268			192			230	
v/s Ratio Prot												
v/s Ratio Perm		0.21			c0.24			c0.07			0.01	
v/c Ratio		0.26			0.31			0.52			0.07	
Uniform Delay, d1		2.2			2.3			32.3			30.3	
Progression Factor		0.20			0.26			1.00			1.00	
Incremental Delay, d2		0.5			0.1			2.5			0.1	
Delay (s)		0.9			0.7			34.8			30.4	
Level of Service		A			A			C			C	
Approach Delay (s)		0.9			0.7			34.8			30.4	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	5.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.915			0.999			0.973			0.972	
Flt Protected					0.986			0.962			0.990	
Satd. Flow (prot)	0	1534	0	0	1651	0	0	1744	0	0	1792	0
Flt Permitted		0.998			0.441			0.760			0.981	
Satd. Flow (perm)	0	1531	0	0	739	0	0	1377	0	0	1776	0
Satd. Flow (RTOR)		114			1			11			4	
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	4	311	538	150	370	5	532	15	134	4	10	4
Adj. Flow (vph)	4	346	598	167	411	6	591	17	149	4	11	4
Lane Group Flow (vph)	0	948	0	0	584	0	0	757	0	0	19	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	59.0	59.0	0.0	16.0	75.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Act Effct Green (s)		72.0			72.0			32.0			32.0	
Actuated g/C Ratio		0.65			0.65			0.29			0.29	
v/c Ratio		0.91			1.21			1.86			0.04	
Control Delay		15.0			130.0			420.2			24.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.0			130.0			420.2			24.2	
LOS		B			F			F			C	
Approach Delay		15.0			130.0			420.2			24.2	
Approach LOS		B			F			F			C	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 56 (51%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.86
Intersection Signal Delay: 177.1 Intersection LOS: F
Intersection Capacity Utilization 132.8% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 48: Mallory St & Mellen St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.91			1.00			0.97			0.97	
Flt Protected		1.00			0.99			0.96			0.99	
Satd. Flow (prot)		1533			1651			1745			1791	
Flt Permitted		1.00			0.55			0.76			0.98	
Satd. Flow (perm)		1531			929			1379			1775	
Volume (vph)	4	311	538	150	370	5	532	15	134	4	10	4
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	346	598	167	411	6	591	17	149	4	11	4
RTOR Reduction (vph)	0	39	0	0	0	0	0	8	0	0	3	0
Lane Group Flow (vph)	0	909	0	0	584	0	0	749	0	0	16	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		70.0			70.0			30.0			30.0	
Effective Green, g (s)		72.0			72.0			32.0			32.0	
Actuated g/C Ratio		0.65			0.65			0.29			0.29	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1002			608			401			516	
v/s Ratio Prot												
v/s Ratio Perm		0.59			c0.63			c0.54			0.01	
v/c Ratio		0.91			0.96			1.87			0.03	
Uniform Delay, d1		16.1			17.7			39.0			27.9	
Progression Factor		0.50			0.81			1.00			1.00	
Incremental Delay, d2		6.4			25.5			400.2			0.0	
Delay (s)		14.5			39.9			439.2			27.9	
Level of Service		B			D			F			C	
Approach Delay (s)		14.5			39.9			439.2			27.9	
Approach LOS		B			D			F			C	

Intersection Summary

HCM Average Control Delay	160.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	132.8%	ICU Level of Service	H
Analysis Period (min)	15		

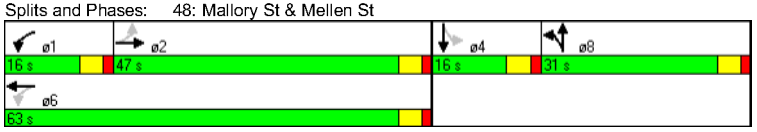
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.905			0.998			0.940			0.972	
Flt Protected					0.986		0.950	0.973			0.990	
Satd. Flow (prot)	0	3043	0	0	3309	0	1681	1619	0	0	1792	0
Flt Permitted		0.953			0.510		0.950	0.973			0.442	
Satd. Flow (perm)	0	2900	0	0	1711	0	1681	1619	0	0	800	0
Satd. Flow (RTOR)		466			1			29			4	
Headway Factor	1.00	1.07	1.00	1.00	1.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	4	311	538	150	370	5	532	15	134	4	10	4
Adj. Flow (vph)	4	346	598	167	411	6	591	17	149	4	11	4
Lane Group Flow (vph)	0	948	0	0	584	0	386	371	0	0	19	0
Turn Type	Perm			pm+pt			Split			Perm		
Protected Phases		2		1	6		8	8			4	
Permitted Phases	2			6						4		
Total Split (s)	47.0	47.0	0.0	16.0	63.0	0.0	31.0	31.0	0.0	16.0	16.0	0.0
Act Effct Green (s)		67.4			67.4		30.6	30.6			9.6	
Actuated g/C Ratio		0.61			0.61		0.28	0.28			0.09	
v/c Ratio		0.48			1.17dl		0.82	0.79			0.26	
Control Delay		3.2			13.2		52.0	46.1			43.5	
Queue Delay		0.0			0.3		0.0	0.0			0.0	
Total Delay		3.2			13.5		52.0	46.1			43.5	
LOS		A			B		D	D			D	
Approach Delay		3.2			13.5			49.1			43.5	
Approach LOS		A			B			D			D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 49 (45%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 21.2	Intersection LOS: C
Intersection Capacity Utilization 76.7%	ICU Level of Service D
Analysis Period (min) 15	

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 48: Mallory St & Mellen St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0		3.0	3.0			3.0	
Lane Util. Factor		0.95			0.95		0.95	0.95			1.00	
Frt		0.91			1.00		1.00	0.94			0.97	
Flt Protected		1.00			0.99		0.95	0.97			0.99	
Satd. Flow (prot)		3043			3310		1681	1618			1791	
Flt Permitted		0.95			0.55		0.95	0.97			0.40	
Satd. Flow (perm)		2902			1832		1681	1618			730	
Volume (vph)	4	311	538	150	370	5	532	15	134	4	10	4
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	346	598	167	411	6	591	17	149	4	11	4
RTOR Reduction (vph)	0	193	0	0	0	0	0	21	0	0	4	0
Lane Group Flow (vph)	0	755	0	0	584	0	386	350	0	0	15	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			pm+pt			Split			Perm		
Protected Phases		2		1	6		8	8			4	
Permitted Phases	2			6						4		
Actuated Green, G (s)		62.4			62.4		28.6	28.6			4.0	
Effective Green, g (s)		64.4			64.4		30.6	30.6			6.0	
Actuated g/C Ratio		0.59			0.59		0.28	0.28			0.05	
Clearance Time (s)		5.0			5.0		5.0	5.0			5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		1699			1073		468	450			40	
v/s Ratio Prot							c0.23	0.22				
v/s Ratio Perm		0.26			c0.32						c0.02	
v/c Ratio		0.44			1.17dl		0.82	0.78			0.38	
Uniform Delay, d1		12.8			13.9		37.2	36.6			50.2	
Progression Factor		0.40			0.76		1.00	1.00			1.00	
Incremental Delay, d2		0.7			0.6		11.3	8.3			6.0	
Delay (s)		5.9			11.1		48.5	44.9			56.2	
Level of Service		A			B		D	D			E	
Approach Delay (s)		5.9			11.1			46.7			56.2	
Approach LOS		A			B			D			E	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

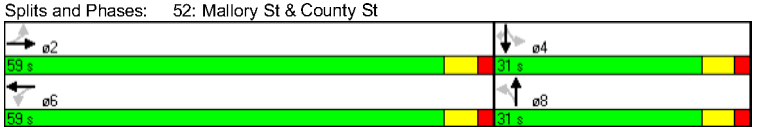
Traffic Analysis

Mallory Street/County Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.990			0.994				0.850
Flt Protected		0.996						0.992			0.973	
Satd. Flow (prot)	0	1666	0	0	1660	0	0	1837	0	0	1812	1583
Flt Permitted		0.955			0.999			0.972			0.870	
Satd. Flow (perm)	0	1598	0	0	1658	0	0	1800	0	0	1621	1583
Satd. Flow (RTOR)		1			8			1				37
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	12	145	2	3	511	40	4	17	1	32	27	33
Adj. Flow (vph)	13	161	2	3	568	44	4	19	1	36	30	37
Lane Group Flow (vph)	0	176	0	0	615	0	0	24	0	0	66	37
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	59.0	59.0	0.0	59.0	59.0	0.0	31.0	31.0	0.0	31.0	31.0	31.0
Act Effct Green (s)		75.2			75.2			11.7			11.7	11.7
Actuated g/C Ratio		0.84			0.84			0.13			0.13	0.13
v/c Ratio		0.13			0.44			0.10			0.31	0.16
Control Delay		1.9			2.7			32.5			35.3	11.7
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		1.9			2.7			32.5			35.3	11.7
LOS		A			A			C			D	B
Approach Delay		1.9			2.7			32.5			26.8	
Approach LOS		A			A			C			C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 3 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 6.0	Intersection LOS: A
Intersection Capacity Utilization 46.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.99			0.99			1.00	0.85
Flt Protected		1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)		1668			1660			1837			1813	1583
Flt Permitted		0.96			1.00			0.95			0.82	1.00
Satd. Flow (perm)		1602			1659			1757			1534	1583
Volume (vph)	12	145	2	3	511	40	4	17	1	32	27	33
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	161	2	3	568	44	4	19	1	36	30	37
RTOR Reduction (vph)	0	0	0	0	1	0	0	1	0	0	0	33
Lane Group Flow (vph)	0	176	0	0	614	0	0	23	0	0	66	4
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		70.4			70.4			7.6			7.6	7.6
Effective Green, g (s)		73.4			73.4			10.6			10.6	10.6
Actuated g/C Ratio		0.82			0.82			0.12			0.12	0.12
Clearance Time (s)		6.0			6.0			6.0			6.0	6.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1307			1353			207			181	186
v/s Ratio Prot												
v/s Ratio Perm		0.11			c0.37			0.01			c0.04	0.00
v/c Ratio		0.13			0.45			0.11			0.36	0.02
Uniform Delay, d1		1.7			2.4			35.5			36.6	35.1
Progression Factor		0.78			0.59			1.00			1.00	1.00
Incremental Delay, d2		0.2			1.0			0.2			1.3	0.1
Delay (s)		1.5			2.5			35.7			37.8	35.2
Level of Service		A			A			D			D	D
Approach Delay (s)		1.5			2.5			35.7			36.9	
Approach LOS		A			A			D			D	

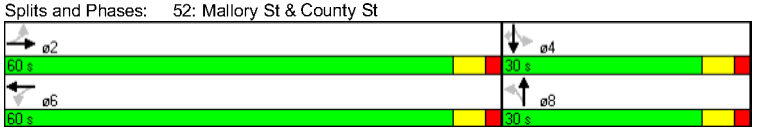
Intersection Summary			
HCM Average Control Delay	7.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.992			0.994				0.850
Flt Protected		0.997						0.992			0.973	
Satd. Flow (prot)	0	1670	0	0	1663	0	0	1837	0	0	1812	1583
Flt Permitted		0.954			0.999			0.972			0.869	
Satd. Flow (perm)	0	1598	0	0	1661	0	0	1800	0	0	1619	1583
Satd. Flow (RTOR)		1			7			1				37
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	12	182	2	3	642	40	4	17	1	32	27	33
Adj. Flow (vph)	13	202	2	3	713	44	4	19	1	36	30	37
Lane Group Flow (vph)	0	217	0	0	760	0	0	24	0	0	66	37
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	60.0	60.0	0.0	60.0	60.0	0.0	30.0	30.0	0.0	30.0	30.0	30.0
Act Effct Green (s)		75.1			75.1			11.8			11.8	11.8
Actuated g/C Ratio		0.83			0.83			0.13			0.13	0.13
v/c Ratio		0.16			0.55			0.10			0.31	0.15
Control Delay		1.4			5.4			32.1			35.3	11.7
Queue Delay		0.3			0.0			0.0			0.0	0.0
Total Delay		1.7			5.4			32.1			35.3	11.7
LOS		A			A			C			D	B
Approach Delay		1.7			5.4			32.1			26.8	
Approach LOS		A			A			C			C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 34 (38%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 7.2	Intersection LOS: A
Intersection Capacity Utilization 53.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.99			0.99			1.00	0.85
Flt Protected		1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)		1669			1663			1837			1813	1583
Flt Permitted		0.96			1.00			0.95			0.82	1.00
Satd. Flow (perm)		1602			1662			1758			1536	1583
Volume (vph)	12	182	2	3	642	40	4	17	1	32	27	33
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	202	2	3	713	44	4	19	1	36	30	37
RTOR Reduction (vph)	0	0	0	0	1	0	0	1	0	0	0	33
Lane Group Flow (vph)	0	217	0	0	759	0	0	23	0	0	66	4
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		70.3			70.3			7.7			7.7	7.7
Effective Green, g (s)		73.3			73.3			10.7			10.7	10.7
Actuated g/C Ratio		0.81			0.81			0.12			0.12	0.12
Clearance Time (s)		6.0			6.0			6.0			6.0	6.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1305			1354			209			183	188
v/s Ratio Prot												
v/s Ratio Perm		0.14			c0.46			0.01			c0.04	0.00
v/c Ratio		0.17			0.56			0.11			0.36	0.02
Uniform Delay, d1		1.8			2.9			35.4			36.5	35.0
Progression Factor		0.53			1.12			0.99			1.00	1.00
Incremental Delay, d2		0.2			1.5			0.2			1.2	0.1
Delay (s)		1.2			4.7			35.3			37.7	35.1
Level of Service		A			A			D			D	D
Approach Delay (s)		1.2			4.7			35.3			36.8	
Approach LOS		A			A			D			D	

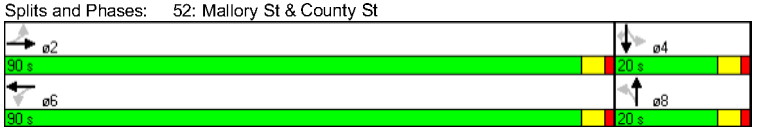
Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.992			0.994				0.850
Flt Protected		0.993						0.992			0.973	
Satd. Flow (prot)	0	1663	0	0	1663	0	0	1837	0	0	1812	1583
Flt Permitted		0.864			0.999			0.965			0.849	
Satd. Flow (perm)	0	1447	0	0	1661	0	0	1787	0	0	1581	1583
Satd. Flow (RTOR)		1			10			1				22
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	31	187	2	3	647	40	4	17	1	32	27	20
Adj. Flow (vph)	34	208	2	3	719	44	4	19	1	36	30	22
Lane Group Flow (vph)	0	244	0	0	766	0	0	24	0	0	66	22
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	90.0	90.0	0.0	90.0	90.0	0.0	20.0	20.0	0.0	20.0	20.0	20.0
Act Effct Green (s)		95.0			95.0			11.7			11.8	11.8
Actuated g/C Ratio		0.86			0.86			0.11			0.11	0.11
v/c Ratio		0.20			0.53			0.12			0.39	0.12
Control Delay		1.6			2.8			42.2			47.6	17.0
Queue Delay		0.4			0.1			0.0			0.0	0.0
Total Delay		2.0			2.9			42.2			47.6	17.0
LOS		A			A			D			D	B
Approach Delay		2.0			2.9			42.2			40.0	
Approach LOS		A			A			D			D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 46 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 6.5	Intersection LOS: A
Intersection Capacity Utilization 53.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.99			0.99			1.00	0.85
Flt Protected		0.99			1.00			0.99			0.97	1.00
Satd. Flow (prot)		1663			1663			1837			1813	1583
Flt Permitted		0.86			1.00			0.95			0.83	1.00
Satd. Flow (perm)		1448			1662			1765			1549	1583
Volume (vph)	31	187	2	3	647	40	4	17	1	32	27	20
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	208	2	3	719	44	4	19	1	36	30	22
RTOR Reduction (vph)	0	0	0	0	2	0	0	1	0	0	0	20
Lane Group Flow (vph)	0	244	0	0	764	0	0	23	0	0	66	2
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		91.4			91.4			8.6			8.6	8.6
Effective Green, g (s)		93.4			93.4			10.6			10.6	10.6
Actuated g/C Ratio		0.85			0.85			0.10			0.10	0.10
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1229			1411			170			149	153
v/s Ratio Prot												
v/s Ratio Perm		0.17			c0.46			0.01			c0.04	0.00
v/c Ratio		0.20			0.54			0.14			0.44	0.01
Uniform Delay, d1		1.5			2.3			45.5			46.9	45.0
Progression Factor		0.71			0.50			1.00			1.00	1.00
Incremental Delay, d2		0.3			1.4			0.4			2.1	0.0
Delay (s)		1.4			2.6			45.9			49.0	45.0
Level of Service		A			A			D			D	D
Approach Delay (s)		1.4			2.6			45.9			48.0	
Approach LOS		A			A			D			D	

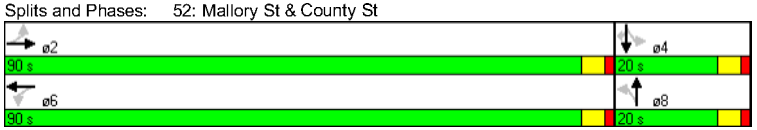
Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.991			0.994				0.850
Flt Protected		0.993						0.992			0.973	
Satd. Flow (prot)	0	3335	0	0	3332	0	0	1837	0	0	1812	1583
Flt Permitted		0.816			0.954			0.965			0.849	
Satd. Flow (perm)	0	2741	0	0	3179	0	0	1787	0	0	1581	1583
Satd. Flow (RTOR)		2			19			1				22
Headway Factor	1.00	1.07	1.00	1.00	1.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	31	187	2	3	647	40	4	17	1	32	27	20
Adj. Flow (vph)	34	208	2	3	719	44	4	19	1	36	30	22
Lane Group Flow (vph)	0	244	0	0	766	0	0	24	0	0	66	22
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	90.0	90.0	0.0	90.0	90.0	0.0	20.0	20.0	0.0	20.0	20.0	20.0
Act Effct Green (s)		95.0			95.0			11.7			11.8	11.8
Actuated g/C Ratio		0.86			0.86			0.11			0.11	0.11
v/c Ratio		0.10			0.28			0.12			0.39	0.12
Control Delay		1.9			1.0			41.5			47.6	17.0
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		1.9			1.0			41.5			47.6	17.0
LOS		A			A			D			D	B
Approach Delay		1.9			1.0			41.5			40.0	
Approach LOS		A			A			D			D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 57 (52%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 43.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		0.95			0.95			1.00			1.00	1.00
Frt		1.00			0.99			0.99			1.00	0.85
Flt Protected		0.99			1.00			0.99			0.97	1.00
Satd. Flow (prot)		3335			3333			1837			1813	1583
Flt Permitted		0.82			0.95			0.95			0.83	1.00
Satd. Flow (perm)		2742			3181			1765			1549	1583
Volume (vph)	31	187	2	3	647	40	4	17	1	32	27	20
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	208	2	3	719	44	4	19	1	36	30	22
RTOR Reduction (vph)	0	0	0	0	3	0	0	1	0	0	0	20
Lane Group Flow (vph)	0	244	0	0	763	0	0	23	0	0	66	2
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		91.4			91.4			8.6			8.6	8.6
Effective Green, g (s)		93.4			93.4			10.6			10.6	10.6
Actuated g/C Ratio		0.85			0.85			0.10			0.10	0.10
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		2328			2701			170			149	153
v/s Ratio Prot												
v/s Ratio Perm		0.09			c0.24			0.01			c0.04	0.00
v/c Ratio		0.10			0.28			0.14			0.44	0.01
Uniform Delay, d1		1.4			1.6			45.5			46.9	45.0
Progression Factor		1.07			0.41			0.98			1.00	1.00
Incremental Delay, d2		0.1			0.3			0.4			2.1	0.0
Delay (s)		1.6			0.9			45.1			49.0	45.0
Level of Service		A			A			D			D	D
Approach Delay (s)		1.6			0.9			45.1			48.0	
Approach LOS		A			A			D			D	

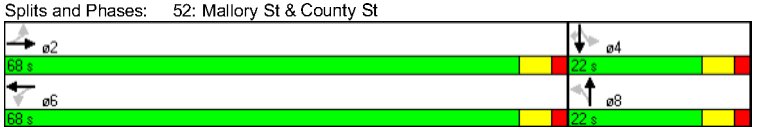
Intersection Summary			
HCM Average Control Delay	5.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.988			0.962				0.850
Flt Protected		0.996			0.997			0.989			0.969	
Satd. Flow (prot)	0	1668	0	0	1651	0	0	1772	0	0	1805	1583
Flt Permitted		0.962			0.971			0.925			0.815	
Satd. Flow (perm)	0	1611	0	0	1608	0	0	1658	0	0	1518	1583
Satd. Flow (RTOR)		2			14			12				57
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	23	299	4	20	285	31	9	19	11	100	55	51
Adj. Flow (vph)	26	332	4	22	317	34	10	21	12	111	61	57
Lane Group Flow (vph)	0	362	0	0	373	0	0	43	0	0	172	57
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	68.0	68.0	0.0	68.0	68.0	0.0	22.0	22.0	0.0	22.0	22.0	22.0
Act Effct Green (s)		67.2			67.2			16.8			16.8	16.8
Actuated g/C Ratio		0.75			0.75			0.19			0.19	0.19
v/c Ratio		0.30			0.31			0.14			0.61	0.17
Control Delay		6.6			5.1			23.7			44.8	15.3
Queue Delay		1.0			0.1			0.0			0.0	0.0
Total Delay		7.5			5.2			23.7			44.8	15.3
LOS		A			A			C			D	B
Approach Delay		7.5			5.2			23.7			37.5	
Approach LOS		A			A			C			D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 9 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 44.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.99			0.96			1.00	0.85
Flt Protected		1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)		1668			1651			1772			1805	1583
Flt Permitted		0.96			0.97			0.92			0.82	1.00
Satd. Flow (perm)		1611			1608			1650			1522	1583
Volume (vph)	23	299	4	20	285	31	9	19	11	100	55	51
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	332	4	22	317	34	10	21	12	111	61	57
RTOR Reduction (vph)	0	1	0	0	4	0	0	10	0	0	0	46
Lane Group Flow (vph)	0	361	0	0	369	0	0	33	0	0	172	11
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		64.2			64.2			13.8			13.8	13.8
Effective Green, g (s)		67.2			67.2			16.8			16.8	16.8
Actuated g/C Ratio		0.75			0.75			0.19			0.19	0.19
Clearance Time (s)		6.0			6.0			6.0			6.0	6.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1203			1201			308			284	295
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.23			0.02			c0.11	0.01
v/c Ratio		0.30			0.31			0.11			0.61	0.04
Uniform Delay, d1		3.7			3.7			30.4			33.6	30.0
Progression Factor		1.45			1.11			1.00			1.15	1.68
Incremental Delay, d2		0.6			0.7			0.2			3.6	0.1
Delay (s)		6.0			4.8			30.4			42.2	50.5
Level of Service		A			A			C			D	D
Approach Delay (s)		6.0			4.8			30.4			44.3	
Approach LOS		A			A			C			D	

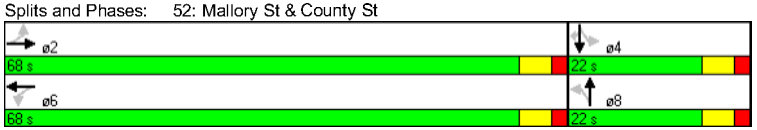
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.990			0.962				0.850
Flt Protected		0.997			0.998			0.989			0.969	
Satd. Flow (prot)	0	1670	0	0	1656	0	0	1772	0	0	1805	1583
Flt Permitted		0.964			0.972			0.925			0.815	
Satd. Flow (perm)	0	1615	0	0	1613	0	0	1658	0	0	1518	1583
Satd. Flow (RTOR)		1			12			12				57
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	23	376	4	20	358	31	9	19	11	100	55	51
Adj. Flow (vph)	26	418	4	22	398	34	10	21	12	111	61	57
Lane Group Flow (vph)	0	448	0	0	454	0	0	43	0	0	172	57
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	68.0	68.0	0.0	68.0	68.0	0.0	22.0	22.0	0.0	22.0	22.0	22.0
Act Effct Green (s)		67.2			67.2			16.8			16.8	16.8
Actuated g/C Ratio		0.75			0.75			0.19			0.19	0.19
v/c Ratio		0.37			0.38			0.13			0.61	0.17
Control Delay		2.3			7.0			23.9			44.7	15.1
Queue Delay		0.2			0.0			0.0			0.0	0.0
Total Delay		2.5			7.0			23.9			44.7	15.1
LOS		A			A			C			D	B
Approach Delay		2.5			7.0			23.9			37.3	
Approach LOS		A			A			C			D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 54 (60%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 49.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.99			0.96			1.00	0.85
Flt Protected		1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)		1670			1656			1772			1805	1583
Flt Permitted		0.96			0.97			0.92			0.82	1.00
Satd. Flow (perm)		1615			1613			1650			1522	1583
Volume (vph)	23	376	4	20	358	31	9	19	11	100	55	51
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	418	4	22	398	34	10	21	12	111	61	57
RTOR Reduction (vph)	0	0	0	0	3	0	0	10	0	0	0	46
Lane Group Flow (vph)	0	448	0	0	451	0	0	33	0	0	172	11
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		64.2			64.2			13.8			13.8	13.8
Effective Green, g (s)		67.2			67.2			16.8			16.8	16.8
Actuated g/C Ratio		0.75			0.75			0.19			0.19	0.19
Clearance Time (s)		6.0			6.0			6.0			6.0	6.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1206			1204			308			284	295
v/s Ratio Prot												
v/s Ratio Perm		0.28			c0.28			0.02			c0.11	0.01
v/c Ratio		0.37			0.37			0.11			0.61	0.04
Uniform Delay, d1		4.0			4.0			30.4			33.6	30.0
Progression Factor		0.33			1.39			1.01			1.15	1.66
Incremental Delay, d2		0.8			0.9			0.2			3.6	0.1
Delay (s)		2.1			6.5			30.7			42.2	49.8
Level of Service		A			A			C			D	D
Approach Delay (s)		2.1			6.5			30.7			44.1	
Approach LOS		A			A			C			D	

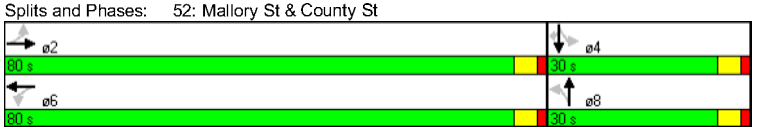
Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.991			0.962				0.850
Flt Protected		0.993			0.998			0.989			0.969	
Satd. Flow (prot)	0	1663	0	0	1658	0	0	1772	0	0	1805	1583
Flt Permitted		0.872			0.969			0.935			0.808	
Satd. Flow (perm)	0	1460	0	0	1610	0	0	1675	0	0	1505	1583
Satd. Flow (RTOR)		1			8			12				122
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	70	424	4	20	405	31	9	19	11	100	55	110
Adj. Flow (vph)	78	471	4	22	450	34	10	21	12	111	61	122
Lane Group Flow (vph)	0	553	0	0	506	0	0	43	0	0	172	122
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	80.0	80.0	0.0	80.0	80.0	0.0	30.0	30.0	0.0	30.0	30.0	30.0
Act Effct Green (s)		84.9			84.9			19.1			19.1	19.1
Actuated g/C Ratio		0.77			0.77			0.17			0.17	0.17
v/c Ratio		0.49			0.41			0.14			0.66	0.32
Control Delay		4.2			3.8			28.3			50.6	12.1
Queue Delay		2.2			0.2			0.0			0.0	0.0
Total Delay		6.5			4.0			28.3			50.6	12.1
LOS		A			A			C			D	B
Approach Delay		6.5			4.0			28.3			34.6	
Approach LOS		A			A			C			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 63 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 72.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.99			0.96			1.00	0.85
Flt Protected		0.99			1.00			0.99			0.97	1.00
Satd. Flow (prot)		1663			1658			1772			1805	1583
Flt Permitted		0.87			0.97			0.93			0.80	1.00
Satd. Flow (perm)		1462			1609			1660			1495	1583
Volume (vph)	70	424	4	20	405	31	9	19	11	100	55	110
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	471	4	22	450	34	10	21	12	111	61	122
RTOR Reduction (vph)	0	0	0	0	2	0	0	10	0	0	0	101
Lane Group Flow (vph)	0	553	0	0	504	0	0	33	0	0	172	21
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		82.9			82.9			17.1			17.1	17.1
Effective Green, g (s)		84.9			84.9			19.1			19.1	19.1
Actuated g/C Ratio		0.77			0.77			0.17			0.17	0.17
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1128			1242			288			260	275
v/s Ratio Prot												
v/s Ratio Perm		c0.38			0.31			0.02			c0.12	0.01
v/c Ratio		0.49			0.41			0.11			0.66	0.08
Uniform Delay, d1		4.6			4.2			38.3			42.4	38.1
Progression Factor		0.73			0.58			1.00			1.12	1.69
Incremental Delay, d2		0.1			0.9			0.2			6.2	0.1
Delay (s)		3.5			3.3			38.5			53.7	64.5
Level of Service		A			A			D			D	E
Approach Delay (s)		3.5			3.3			38.5			58.2	
Approach LOS		A			A			D			E	

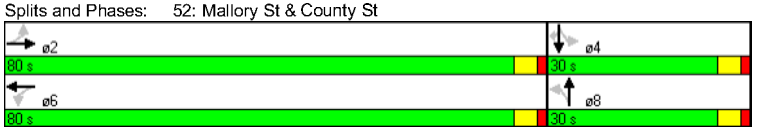
Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.990			0.962				0.850
Flt Protected		0.993			0.998			0.989			0.969	
Satd. Flow (prot)	0	3335	0	0	3322	0	0	1772	0	0	1805	1583
Flt Permitted		0.806			0.919			0.935			0.808	
Satd. Flow (perm)	0	2707	0	0	3059	0	0	1675	0	0	1505	1583
Satd. Flow (RTOR)		2			16			12				122
Headway Factor	1.00	1.07	1.00	1.00	1.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	70	424	4	20	405	31	9	19	11	100	55	110
Adj. Flow (vph)	78	471	4	22	450	34	10	21	12	111	61	122
Lane Group Flow (vph)	0	553	0	0	506	0	0	43	0	0	172	122
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	80.0	80.0	0.0	80.0	80.0	0.0	30.0	30.0	0.0	30.0	30.0	30.0
Act Effct Green (s)		84.8			84.8			19.2			19.2	19.2
Actuated g/C Ratio		0.77			0.77			0.17			0.17	0.17
v/c Ratio		0.26			0.21			0.14			0.66	0.32
Control Delay		3.8			2.2			27.6			46.6	11.8
Queue Delay		0.3			0.0			0.0			0.0	0.0
Total Delay		4.0			2.2			27.6			46.6	11.8
LOS		A			A			C			D	B
Approach Delay		4.0			2.2			27.6			32.2	
Approach LOS		A			A			C			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 37 (34%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 10.0	Intersection LOS: B
Intersection Capacity Utilization 51.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		0.95			0.95			1.00			1.00	1.00
Frt		1.00			0.99			0.96			1.00	0.85
Flt Protected		0.99			1.00			0.99			0.97	1.00
Satd. Flow (prot)		3335			3321			1772			1805	1583
Flt Permitted		0.81			0.92			0.93			0.80	1.00
Satd. Flow (perm)		2709			3061			1661			1495	1583
Volume (vph)	70	424	4	20	405	31	9	19	11	100	55	110
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	471	4	22	450	34	10	21	12	111	61	122
RTOR Reduction (vph)	0	0	0	0	4	0	0	10	0	0	0	101
Lane Group Flow (vph)	0	553	0	0	502	0	0	33	0	0	172	21
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		82.8			82.8			17.2			17.2	17.2
Effective Green, g (s)		84.8			84.8			19.2			19.2	19.2
Actuated g/C Ratio		0.77			0.77			0.17			0.17	0.17
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		2088			2360			290			261	276
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.16			0.02			c0.12	0.01
v/c Ratio		0.26			0.21			0.11			0.66	0.08
Uniform Delay, d1		3.6			3.5			38.2			42.3	38.0
Progression Factor		0.84			0.51			0.97			1.03	1.65
Incremental Delay, d2		0.3			0.2			0.2			5.9	0.1
Delay (s)		3.3			2.0			37.4			49.3	62.7
Level of Service		A			A			D			D	E
Approach Delay (s)		3.3			2.0			37.4			54.9	
Approach LOS		A			A			D			D	

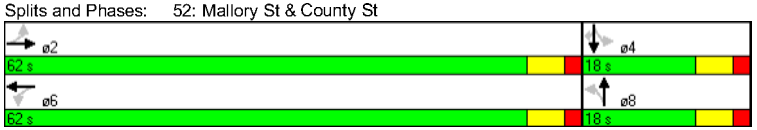
Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.991			0.957				0.850
Flt Protected		0.995			0.999			0.995			0.967	
Satd. Flow (prot)	0	1650	0	0	1660	0	0	1774	0	0	1801	1583
Flt Permitted		0.954			0.994			0.976			0.816	
Satd. Flow (perm)	0	1582	0	0	1651	0	0	1740	0	0	1520	1583
Satd. Flow (RTOR)		15			12			9				27
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	22	178	17	7	283	21	3	14	8	33	15	24
Adj. Flow (vph)	24	198	19	8	314	23	3	16	9	37	17	27
Lane Group Flow (vph)	0	241	0	0	345	0	0	28	0	0	54	27
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	62.0	62.0	0.0	62.0	62.0	0.0	18.0	18.0	0.0	18.0	18.0	18.0
Act Effct Green (s)		65.7			65.7			11.2			11.2	11.2
Actuated g/C Ratio		0.82			0.82			0.14			0.14	0.14
v/c Ratio		0.19			0.25			0.11			0.25	0.11
Control Delay		1.0			2.8			22.6			31.5	12.1
Queue Delay		0.3			0.0			0.0			0.0	0.0
Total Delay		1.3			2.8			22.6			31.5	12.1
LOS		A			A			C			C	B
Approach Delay		1.3			2.8			22.6			25.0	
Approach LOS		A			A			C			C	

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 16 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.25			
Intersection Signal Delay: 5.7		Intersection LOS: A	
Intersection Capacity Utilization 37.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.99			0.96			1.00	0.85
Flt Protected		1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)		1650			1659			1772			1801	1583
Flt Permitted		0.95			0.99			0.97			0.78	1.00
Satd. Flow (perm)		1584			1652			1724			1462	1583
Volume (vph)	22	178	17	7	283	21	3	14	8	33	15	24
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	198	19	8	314	23	3	16	9	37	17	27
RTOR Reduction (vph)	0	3	0	0	2	0	0	8	0	0	0	24
Lane Group Flow (vph)	0	238	0	0	343	0	0	20	0	0	54	3
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		60.9			60.9			7.1			7.1	7.1
Effective Green, g (s)		63.9			63.9			10.1			10.1	10.1
Actuated g/C Ratio		0.80			0.80			0.13			0.13	0.13
Clearance Time (s)		6.0			6.0			6.0			6.0	6.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1265			1320			218			185	200
v/s Ratio Prot												
v/s Ratio Perm		0.15			c0.21			0.01			c0.04	0.00
v/c Ratio		0.19			0.26			0.09			0.29	0.02
Uniform Delay, d1		1.9			2.0			30.9			31.7	30.6
Progression Factor		0.32			0.98			1.00			1.00	1.00
Incremental Delay, d2		0.3			0.5			0.2			0.9	0.0
Delay (s)		0.9			2.5			31.1			32.6	30.6
Level of Service		A			A			C			C	C
Approach Delay (s)		0.9			2.5			31.1			31.9	
Approach LOS		A			A			C			C	

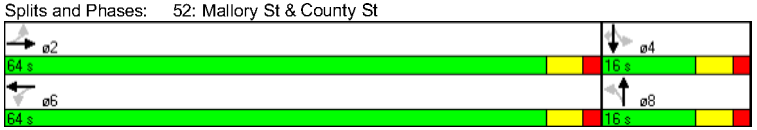
Intersection Summary			
HCM Average Control Delay	6.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.993			0.957				0.850
Flt Protected		0.996			0.999			0.995			0.967	
Satd. Flow (prot)	0	1655	0	0	1663	0	0	1774	0	0	1801	1583
Flt Permitted		0.956			0.995			0.973			0.806	
Satd. Flow (perm)	0	1588	0	0	1656	0	0	1735	0	0	1501	1583
Satd. Flow (RTOR)		13			11			9				27
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	22	224	17	7	356	21	3	14	8	33	15	24
Adj. Flow (vph)	24	249	19	8	396	23	3	16	9	37	17	27
Lane Group Flow (vph)	0	292	0	0	427	0	0	28	0	0	54	27
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	64.0	64.0	0.0	64.0	64.0	0.0	16.0	16.0	0.0	16.0	16.0	16.0
Act Effct Green (s)		65.9			65.9			11.0			11.0	11.0
Actuated g/C Ratio		0.82			0.82			0.14			0.14	0.14
v/c Ratio		0.22			0.31			0.11			0.26	0.11
Control Delay		1.7			2.9			23.2			32.5	12.5
Queue Delay		0.2			0.0			0.0			0.0	0.0
Total Delay		2.0			2.9			23.2			32.5	12.5
LOS		A			A			C			C	B
Approach Delay		2.0			2.9			23.2			25.9	
Approach LOS		A			A			C			C	

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 44 (55%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.31			
Intersection Signal Delay: 5.5		Intersection LOS: A	
Intersection Capacity Utilization 41.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.99			0.96			1.00	0.85
Flt Protected		1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)		1655			1663			1772			1801	1583
Flt Permitted		0.96			0.99			0.97			0.78	1.00
Satd. Flow (perm)		1589			1655			1723			1458	1583
Volume (vph)	22	224	17	7	356	21	3	14	8	33	15	24
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	249	19	8	396	23	3	16	9	37	17	27
RTOR Reduction (vph)	0	3	0	0	2	0	0	8	0	0	0	24
Lane Group Flow (vph)	0	289	0	0	425	0	0	20	0	0	54	3
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		61.1			61.1			6.9			6.9	6.9
Effective Green, g (s)		64.1			64.1			9.9			9.9	9.9
Actuated g/C Ratio		0.80			0.80			0.12			0.12	0.12
Clearance Time (s)		6.0			6.0			6.0			6.0	6.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1273			1326			213			180	196
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.26			0.01			c0.04	0.00
v/c Ratio		0.23			0.32			0.09			0.30	0.02
Uniform Delay, d1		1.9			2.1			31.1			31.9	30.8
Progression Factor		0.61			0.94			1.00			1.00	1.00
Incremental Delay, d2		0.4			0.6			0.2			0.9	0.0
Delay (s)		1.6			2.6			31.3			32.8	30.8
Level of Service		A			A			C			C	C
Approach Delay (s)		1.6			2.6			31.3			32.2	
Approach LOS		A			A			C			C	

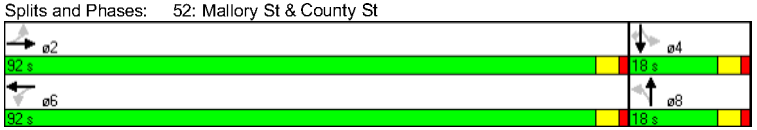
Intersection Summary			
HCM Average Control Delay	6.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.994			0.957				0.850
Flt Protected		0.988			0.999			0.995			0.967	
Satd. Flow (prot)	0	1648	0	0	1665	0	0	1774	0	0	1801	1583
Flt Permitted		0.781			0.993			0.977			0.809	
Satd. Flow (perm)	0	1303	0	0	1655	0	0	1742	0	0	1507	1583
Satd. Flow (RTOR)		7			8			9				123
Headway Factor	1.00	1.14	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	104	310	17	7	442	21	3	14	8	33	15	111
Adj. Flow (vph)	116	344	19	8	491	23	3	16	9	37	17	123
Lane Group Flow (vph)	0	479	0	0	522	0	0	28	0	0	54	123
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	92.0	92.0	0.0	92.0	92.0	0.0	18.0	18.0	0.0	18.0	18.0	18.0
Act Effct Green (s)		92.8			92.8			11.2			11.2	11.2
Actuated g/C Ratio		0.84			0.84			0.10			0.10	0.10
v/c Ratio		0.44			0.37			0.15			0.35	0.45
Control Delay		2.9			1.2			34.0			48.2	11.5
Queue Delay		2.4			0.2			0.0			0.0	0.2
Total Delay		5.3			1.4			34.0			48.2	11.7
LOS		A			A			C			D	B
Approach Delay		5.3			1.4			34.0			22.8	
Approach LOS		A			A			C			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 68 (62%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 67.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.99			0.96			1.00	0.85
Flt Protected		0.99			1.00			0.99			0.97	1.00
Satd. Flow (prot)		1648			1665			1772			1801	1583
Flt Permitted		0.78			0.99			0.97			0.83	1.00
Satd. Flow (perm)		1303			1656			1733			1549	1583
Volume (vph)	104	310	17	7	442	21	3	14	8	33	15	111
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	116	344	19	8	491	23	3	16	9	37	17	123
RTOR Reduction (vph)	0	1	0	0	1	0	0	8	0	0	0	110
Lane Group Flow (vph)	0	478	0	0	521	0	0	20	0	0	54	13
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		90.8			90.8			9.2			9.2	9.2
Effective Green, g (s)		92.8			92.8			11.2			11.2	11.2
Actuated g/C Ratio		0.84			0.84			0.10			0.10	0.10
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1099			1397			176			158	161
v/s Ratio Prot												
v/s Ratio Perm		c0.37			0.31			0.01			c0.03	0.01
v/c Ratio		0.43			0.37			0.11			0.34	0.08
Uniform Delay, d1		2.1			2.0			44.9			46.0	44.7
Progression Factor		1.14			0.37			1.00			1.00	1.00
Incremental Delay, d2		0.1			0.4			0.3			1.3	0.2
Delay (s)		2.5			1.1			45.2			47.3	44.9
Level of Service		A			A			D			D	D
Approach Delay (s)		2.5			1.1			45.2			45.6	
Approach LOS		A			A			D			D	

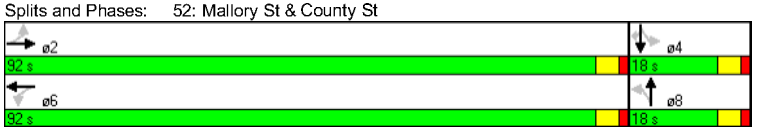
Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.993			0.957				0.850
Flt Protected		0.988			0.999			0.995			0.967	
Satd. Flow (prot)	0	3302	0	0	3335	0	0	1774	0	0	1801	1583
Flt Permitted		0.722			0.948			0.977			0.809	
Satd. Flow (perm)	0	2413	0	0	3165	0	0	1742	0	0	1507	1583
Satd. Flow (RTOR)		14			16			9				123
Headway Factor	1.00	1.07	1.00	1.00	1.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	104	310	17	7	442	21	3	14	8	33	15	111
Adj. Flow (vph)	116	344	19	8	491	23	3	16	9	37	17	123
Lane Group Flow (vph)	0	479	0	0	522	0	0	28	0	0	54	123
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Total Split (s)	92.0	92.0	0.0	92.0	92.0	0.0	18.0	18.0	0.0	18.0	18.0	18.0
Act Effct Green (s)		92.8			92.8			11.2			11.2	11.2
Actuated g/C Ratio		0.84			0.84			0.10			0.10	0.10
v/c Ratio		0.24			0.20			0.15			0.35	0.45
Control Delay		1.4			1.0			33.7			47.7	12.3
Queue Delay		0.2			0.0			0.0			0.0	0.1
Total Delay		1.6			1.0			33.7			47.7	12.4
LOS		A			A			C			D	B
Approach Delay		1.6			1.0			33.7			23.1	
Approach LOS		A			A			C			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 51 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 5.2	Intersection LOS: A
Intersection Capacity Utilization 44.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 52: Mallory St & County St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	3.0
Lane Util. Factor		0.95			0.95			1.00			1.00	1.00
Frt		0.99			0.99			0.96			1.00	0.85
Flt Protected		0.99			1.00			0.99			0.97	1.00
Satd. Flow (prot)		3302			3337			1772			1801	1583
Flt Permitted		0.72			0.95			0.97			0.83	1.00
Satd. Flow (perm)		2413			3167			1733			1549	1583
Volume (vph)	104	310	17	7	442	21	3	14	8	33	15	111
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	116	344	19	8	491	23	3	16	9	37	17	123
RTOR Reduction (vph)	0	2	0	0	3	0	0	8	0	0	0	110
Lane Group Flow (vph)	0	477	0	0	519	0	0	20	0	0	54	13
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		90.8			90.8			9.2			9.2	9.2
Effective Green, g (s)		92.8			92.8			11.2			11.2	11.2
Actuated g/C Ratio		0.84			0.84			0.10			0.10	0.10
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		2036			2672			176			158	161
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.16			0.01			c0.03	0.01
v/c Ratio		0.23			0.19			0.11			0.34	0.08
Uniform Delay, d1		1.7			1.6			44.9			46.0	44.7
Progression Factor		0.63			0.47			0.99			0.99	1.10
Incremental Delay, d2		0.2			0.1			0.3			1.3	0.2
Delay (s)		1.3			0.9			44.9			46.7	49.4
Level of Service		A			A			D			D	D
Approach Delay (s)		1.3			0.9			44.9			48.6	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

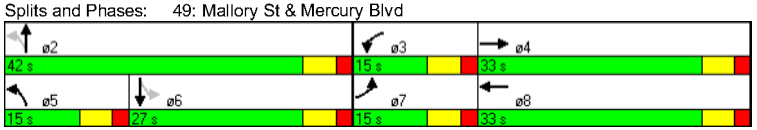
Traffic Analysis

Mallory Street/Mercury Boulevard

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.951			0.986			0.978			0.982	
Flt Protected	0.950			0.950				0.991			0.998	
Satd. Flow (prot)	1770	1771	0	1770	1837	0	0	3430	0	0	3469	0
Flt Permitted	0.950			0.950				0.900			0.944	
Satd. Flow (perm)	1770	1771	0	1770	1837	0	0	3115	0	0	3281	0
Satd. Flow (RTOR)		29			6			16			16	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	25	94	46	145	405	42	18	64	14	15	361	51
Adj. Flow (vph)	28	104	51	161	450	47	20	71	16	17	401	57
Lane Group Flow (vph)	28	155	0	161	497	0	0	107	0	0	475	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	15.0	33.0	0.0	15.0	33.0	0.0	15.0	42.0	0.0	27.0	27.0	0.0
Act Effct Green (s)	10.0	43.1		17.3	57.6			20.6			20.6	
Actuated g/C Ratio	0.11	0.48		0.19	0.64			0.23			0.23	
v/c Ratio	0.14	0.18		0.47	0.42			0.15			0.62	
Control Delay	34.2	12.8		36.0	11.9			22.0			31.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	34.2	12.8		36.0	11.9			22.0			31.7	
LOS	C	B		D	B			C			C	
Approach Delay		16.0			17.8			22.0			31.7	
Approach LOS		B			B			C			C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 65 (72%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 52.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 49: Mallory St & Mercury Blvd



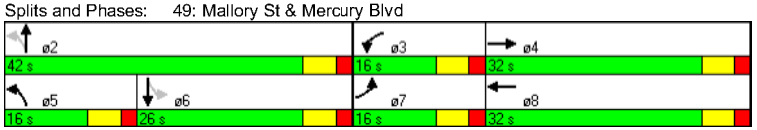
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frt	1.00	0.95		1.00	0.99			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1770	1771		1770	1836			3428			3469	
Flt Permitted	0.95	1.00		0.95	1.00			0.83			0.94	
Satd. Flow (perm)	1770	1771		1770	1836			2864			3278	
Volume (vph)	25	94	46	145	405	42	18	64	14	15	361	51
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	104	51	161	450	47	20	71	16	17	401	57
RTOR Reduction (vph)	0	15	0	0	2	0	0	12	0	0	12	0
Lane Group Flow (vph)	28	140	0	161	495	0	0	95	0	0	463	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	3.3	40.1		14.3	51.1			17.6			17.6	
Effective Green, g (s)	6.3	43.1		17.3	54.1			20.6			20.6	
Actuated g/C Ratio	0.07	0.48		0.19	0.60			0.23			0.23	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	124	848		340	1104			656			750	
v/s Ratio Prot	0.02	0.08		c0.09	c0.27							
v/s Ratio Perm								0.03			c0.14	
v/c Ratio	0.23	0.16		0.47	0.45			0.14			0.62	
Uniform Delay, d1	39.5	13.3		32.3	9.8			27.7			31.2	
Progression Factor	0.93	0.92		1.00	1.00			0.99			1.00	
Incremental Delay, d2	0.9	0.4		1.0	1.3			0.1			1.5	
Delay (s)	37.7	12.6		33.3	11.1			27.5			32.7	
Level of Service	D	B		C	B			C			C	
Approach Delay (s)		16.4			16.6			27.5			32.7	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.958			0.988			0.978			0.982	
Flt Protected	0.950			0.950				0.991			0.998	
Satd. Flow (prot)	1770	1785	0	1770	1840	0	0	3430	0	0	3469	0
Flt Permitted	0.950			0.950				0.905			0.944	
Satd. Flow (perm)	1770	1785	0	1770	1840	0	0	3133	0	0	3281	0
Satd. Flow (RTOR)		23			5			16			16	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	25	118	46	145	509	42	18	64	14	15	361	51
Adj. Flow (vph)	28	131	51	161	566	47	20	71	16	17	401	57
Lane Group Flow (vph)	28	182	0	161	613	0	0	107	0	0	475	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	16.0	32.0	0.0	16.0	32.0	0.0	16.0	42.0	0.0	26.0	26.0	0.0
Act Effct Green (s)	10.0	43.2		17.0	57.5			20.8			20.8	
Actuated g/C Ratio	0.11	0.48		0.19	0.64			0.23			0.23	
v/c Ratio	0.14	0.21		0.48	0.52			0.15			0.62	
Control Delay	30.6	21.2		36.3	13.6			22.3			31.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	30.6	21.2		36.3	13.6			22.3			31.8	
LOS	C	C		D	B			C			C	
Approach Delay		22.5			18.3			22.3			31.8	
Approach LOS		C			B			C			C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 77 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 23.2	Intersection LOS: C
Intersection Capacity Utilization 58.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 49: Mallory St & Mercury Blvd



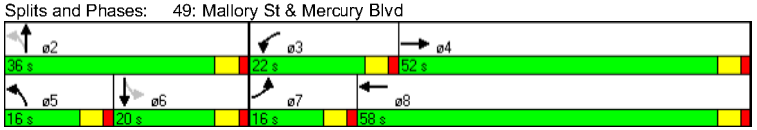
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frt	1.00	0.96		1.00	0.99			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1770	1784		1770	1841			3428			3469	
Flt Permitted	0.95	1.00		0.95	1.00			0.83			0.94	
Satd. Flow (perm)	1770	1784		1770	1841			2874			3278	
Volume (vph)	25	118	46	145	509	42	18	64	14	15	361	51
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	131	51	161	566	47	20	71	16	17	401	57
RTOR Reduction (vph)	0	12	0	0	2	0	0	12	0	0	12	0
Lane Group Flow (vph)	28	170	0	161	611	0	0	95	0	0	463	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	3.3	40.2		14.0	50.9			17.8			17.8	
Effective Green, g (s)	6.3	43.2		17.0	53.9			20.8			20.8	
Actuated g/C Ratio	0.07	0.48		0.19	0.60			0.23			0.23	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	124	856		334	1103			664			758	
v/s Ratio Prot	0.02	0.10		c0.09	c0.33							
v/s Ratio Perm								0.03			c0.14	
v/c Ratio	0.23	0.20		0.48	0.55			0.14			0.61	
Uniform Delay, d1	39.5	13.5		32.6	10.8			27.5			31.0	
Progression Factor	0.83	1.45		1.00	1.00			1.01			1.00	
Incremental Delay, d2	0.9	0.5		1.1	2.0			0.1			1.5	
Delay (s)	33.8	20.0		33.7	12.8			27.8			32.4	
Level of Service	C	B		C	B			C			C	
Approach Delay (s)		21.8			17.2			27.8			32.4	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.956			0.988			0.990			0.970	
Flt Protected	0.950			0.950				0.996			0.996	
Satd. Flow (prot)	1770	1781	0	1770	1840	0	0	3490	0	0	3419	0
Flt Permitted	0.950			0.950				0.933			0.919	
Satd. Flow (perm)	1770	1781	0	1770	1840	0	0	3269	0	0	3155	0
Satd. Flow (RTOR)		25			5			6			24	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	32	114	48	145	517	43	20	191	14	16	167	46
Adj. Flow (vph)	36	127	53	161	574	48	22	212	16	18	186	51
Lane Group Flow (vph)	36	180	0	161	622	0	0	250	0	0	255	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	16.0	52.0	0.0	22.0	58.0	0.0	16.0	36.0	0.0	20.0	20.0	0.0
Act Effct Green (s)	9.7	68.5		17.2	80.4			15.3			15.3	
Actuated g/C Ratio	0.09	0.62		0.16	0.73			0.14			0.14	
v/c Ratio	0.23	0.16		0.58	0.46			0.54			0.55	
Control Delay	44.4	10.0		47.6	9.0			43.1			42.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	44.4	10.0		47.6	9.0			43.1			42.6	
LOS	D	A		D	A			D			D	
Approach Delay		15.7			17.0			43.1			42.6	
Approach LOS		B			B			D			D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 7 (6%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 25.5	Intersection LOS: C
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 49: Mallory St & Mercury Blvd



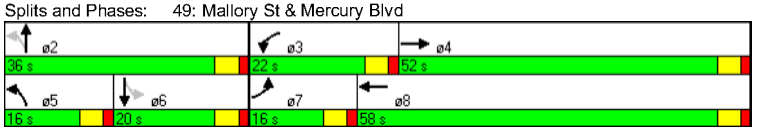
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frt	1.00	0.96		1.00	0.99			0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1780		1770	1841			3490			3421	
Flt Permitted	0.95	1.00		0.95	1.00			0.88			0.92	
Satd. Flow (perm)	1770	1780		1770	1841			3097			3151	
Volume (vph)	32	114	48	145	517	43	20	191	14	16	167	46
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	127	53	161	574	48	22	212	16	18	186	51
RTOR Reduction (vph)	0	9	0	0	1	0	0	5	0	0	21	0
Lane Group Flow (vph)	36	171	0	161	621	0	0	245	0	0	234	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	5.3	66.5		15.2	76.4			13.3			13.3	
Effective Green, g (s)	7.3	68.5		17.2	78.4			15.3			15.3	
Actuated g/C Ratio	0.07	0.62		0.16	0.71			0.14			0.14	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	117	1108		277	1312			431			438	
v/s Ratio Prot	0.02	0.10		c0.09	c0.34							
v/s Ratio Perm								c0.08			0.07	
v/c Ratio	0.31	0.15		0.58	0.47			0.57			0.54	
Uniform Delay, d1	48.9	8.7		43.1	6.8			44.3			44.0	
Progression Factor	0.93	1.08		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.5	0.3		3.1	1.2			1.7			1.3	
Delay (s)	46.8	9.6		46.1	8.1			46.0			45.3	
Level of Service	D	A		D	A			D			D	
Approach Delay (s)		15.8			15.9			46.0			45.3	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.956			0.988			0.990			0.970	
Flt Protected	0.950			0.950				0.996			0.996	
Satd. Flow (prot)	1770	3383	0	1770	3497	0	0	3490	0	0	3419	0
Flt Permitted	0.950			0.950				0.933			0.919	
Satd. Flow (perm)	1770	3383	0	1770	3497	0	0	3269	0	0	3155	0
Satd. Flow (RTOR)		53			11			6			24	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	32	114	48	145	517	43	20	191	14	16	167	46
Adj. Flow (vph)	36	127	53	161	574	48	22	212	16	18	186	51
Lane Group Flow (vph)	36	180	0	161	622	0	0	250	0	0	255	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	16.0	52.0	0.0	22.0	58.0	0.0	16.0	36.0	0.0	20.0	20.0	0.0
Act Effct Green (s)	9.7	68.5		17.2	80.4			15.3			15.3	
Actuated g/C Ratio	0.09	0.62		0.16	0.73			0.14			0.14	
v/c Ratio	0.23	0.08		0.58	0.24			0.54			0.55	
Control Delay	43.1	9.8		47.6	6.2			43.2			42.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	43.1	9.8		47.6	6.2			43.2			42.6	
LOS	D	A		D	A			D			D	
Approach Delay		15.3			14.7			43.2			42.6	
Approach LOS		B			B			D			D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 19 (17%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 45.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 49: Mallory St & Mercury Blvd



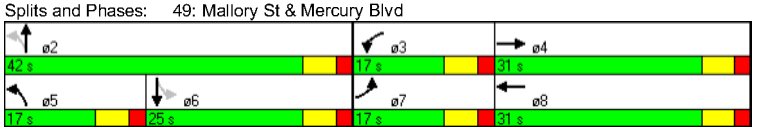
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.99			0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	3383		1770	3498			3490			3421	
Flt Permitted	0.95	1.00		0.95	1.00			0.88			0.92	
Satd. Flow (perm)	1770	3383		1770	3498			3097			3151	
Volume (vph)	32	114	48	145	517	43	20	191	14	16	167	46
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	127	53	161	574	48	22	212	16	18	186	51
RTOR Reduction (vph)	0	20	0	0	3	0	0	5	0	0	21	0
Lane Group Flow (vph)	36	160	0	161	619	0	0	245	0	0	234	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	5.3	66.5		15.2	76.4			13.3			13.3	
Effective Green, g (s)	7.3	68.5		17.2	78.4			15.3			15.3	
Actuated g/C Ratio	0.07	0.62		0.16	0.71			0.14			0.14	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	117	2107		277	2493			431			438	
v/s Ratio Prot	0.02	0.05		c0.09	c0.18							
v/s Ratio Perm								c0.08			0.07	
v/c Ratio	0.31	0.08		0.58	0.25			0.57			0.54	
Uniform Delay, d1	48.9	8.2		43.1	5.5			44.3			44.0	
Progression Factor	0.90	1.38		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.5	0.1		3.1	0.2			1.7			1.3	
Delay (s)	45.3	11.4		46.1	5.8			46.0			45.3	
Level of Service	D	B		D	A			D			D	
Approach Delay (s)		17.1			14.1			46.0			45.3	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.992			0.976			0.971			0.971	
Flt Protected	0.950			0.950				0.996			0.988	
Satd. Flow (prot)	1770	1848	0	1770	1818	0	0	3423	0	0	3395	0
Flt Permitted	0.950			0.950				0.929			0.779	
Satd. Flow (perm)	1770	1848	0	1770	1818	0	0	3193	0	0	2677	0
Satd. Flow (RTOR)		3			11			40			30	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	50	265	14	39	174	32	23	215	57	81	180	62
Adj. Flow (vph)	56	294	16	43	193	36	26	239	63	90	200	69
Lane Group Flow (vph)	56	310	0	43	229	0	0	328	0	0	359	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	17.0	31.0	0.0	17.0	31.0	0.0	17.0	42.0	0.0	25.0	25.0	0.0
Act Effct Green (s)	11.1	56.0		10.6	53.0			19.2			19.2	
Actuated g/C Ratio	0.12	0.62		0.12	0.59			0.21			0.21	
v/c Ratio	0.26	0.27		0.21	0.21			0.46			0.60	
Control Delay	42.4	5.8		36.6	11.1			26.9			31.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	42.4	5.8		36.6	11.1			26.9			31.3	
LOS	D	A		D	B			C			C	
Approach Delay		11.4			15.1			26.9			31.3	
Approach LOS		B			B			C			C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 84 (93%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 21.4	Intersection LOS: C
Intersection Capacity Utilization 49.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 49: Mallory St & Mercury Blvd



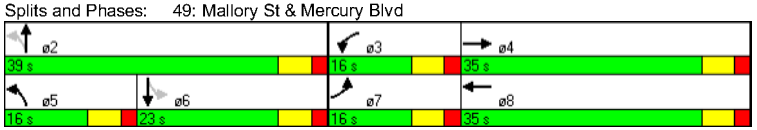
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1770	1848		1770	1819			3424			3395	
Flt Permitted	0.95	1.00		0.95	1.00			0.90			0.70	
Satd. Flow (perm)	1770	1848		1770	1819			3097			2401	
Volume (vph)	50	265	14	39	174	32	23	215	57	81	180	62
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	294	16	43	193	36	26	239	63	90	200	69
RTOR Reduction (vph)	0	1	0	0	5	0	0	31	0	0	24	0
Lane Group Flow (vph)	56	309	0	43	224	0	0	297	0	0	335	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	7.0	50.6		5.2	48.8			16.2			16.2	
Effective Green, g (s)	10.0	53.6		8.2	51.8			19.2			19.2	
Actuated g/C Ratio	0.11	0.60		0.09	0.58			0.21			0.21	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	197	1101		161	1047			661			512	
v/s Ratio Prot	c0.03	c0.17		0.02	0.12							
v/s Ratio Perm								0.10			c0.14	
v/c Ratio	0.28	0.28		0.27	0.21			0.45			0.66	
Uniform Delay, d1	36.7	8.8		38.1	9.2			30.8			32.4	
Progression Factor	1.16	0.51		1.00	1.00			1.01			1.00	
Incremental Delay, d2	0.8	0.6		0.9	0.5			0.5			3.0	
Delay (s)	43.5	5.1		39.0	9.7			31.5			35.4	
Level of Service	D	A		D	A			C			D	
Approach Delay (s)		11.0			14.3			31.5			35.4	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.994			0.981			0.971			0.971	
Flt Protected	0.950			0.950				0.996			0.988	
Satd. Flow (prot)	1770	1852	0	1770	1827	0	0	3423	0	0	3395	0
Flt Permitted	0.950			0.950				0.928			0.777	
Satd. Flow (perm)	1770	1852	0	1770	1827	0	0	3189	0	0	2670	0
Satd. Flow (RTOR)		3			9			38			30	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	50	333	14	39	219	32	23	215	57	81	180	62
Adj. Flow (vph)	56	370	16	43	243	36	26	239	63	90	200	69
Lane Group Flow (vph)	56	386	0	43	279	0	0	328	0	0	359	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	16.0	35.0	0.0	16.0	35.0	0.0	16.0	39.0	0.0	23.0	23.0	0.0
Act Effct Green (s)	11.2	55.7		10.6	52.7			19.4			19.4	
Actuated g/C Ratio	0.12	0.62		0.12	0.59			0.22			0.22	
v/c Ratio	0.25	0.34		0.21	0.26			0.46			0.60	
Control Delay	40.5	10.6		36.7	11.8			26.7			31.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	40.5	10.6		36.7	11.8			26.7			31.6	
LOS	D	B		D	B			C			C	
Approach Delay		14.4			15.1			26.7			31.6	
Approach LOS		B			B			C			C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 70 (78%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 21.6	Intersection LOS: C
Intersection Capacity Utilization 52.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 49: Mallory St & Mercury Blvd



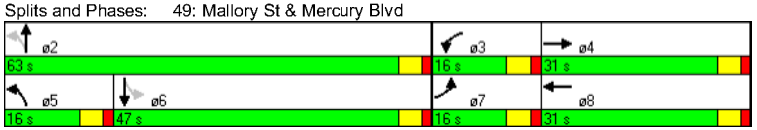
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1770	1851		1770	1827			3424			3395	
Flt Permitted	0.95	1.00		0.95	1.00			0.90			0.70	
Satd. Flow (perm)	1770	1851		1770	1827			3098			2409	
Volume (vph)	50	333	14	39	219	32	23	215	57	81	180	62
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	370	16	43	243	36	26	239	63	90	200	69
RTOR Reduction (vph)	0	1	0	0	4	0	0	30	0	0	24	0
Lane Group Flow (vph)	56	385	0	43	275	0	0	298	0	0	335	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	7.1	50.3		5.3	48.5			16.4			16.4	
Effective Green, g (s)	10.1	53.3		8.3	51.5			19.4			19.4	
Actuated g/C Ratio	0.11	0.59		0.09	0.57			0.22			0.22	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	199	1096		163	1045			668			519	
v/s Ratio Prot	c0.03	c0.21		0.02	0.15							
v/s Ratio Perm								0.10			c0.14	
v/c Ratio	0.28	0.35		0.26	0.26			0.45			0.65	
Uniform Delay, d1	36.6	9.4		38.0	9.7			30.6			32.2	
Progression Factor	1.11	0.90		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.7	0.8		0.9	0.6			0.5			2.8	
Delay (s)	41.3	9.3		38.9	10.3			31.1			34.9	
Level of Service	D	A		D	B			C			C	
Approach Delay (s)		13.4			14.1			31.1			34.9	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.993			0.982			0.988			0.986	
Flt Protected	0.950			0.950				0.998			0.995	
Satd. Flow (prot)	1770	1850	0	1770	1829	0	0	3490	0	0	3472	0
Flt Permitted	0.950			0.950				0.861			0.775	
Satd. Flow (perm)	1770	1850	0	1770	1829	0	0	3011	0	0	2704	0
Satd. Flow (RTOR)		2			6			13			12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	69	358	18	39	240	32	26	644	57	83	742	85
Adj. Flow (vph)	77	398	20	43	267	36	29	716	63	92	824	94
Lane Group Flow (vph)	77	418	0	43	303	0	0	808	0	0	1010	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	16.0	31.0	0.0	16.0	31.0	0.0	16.0	63.0	0.0	47.0	47.0	0.0
Act Effct Green (s)	11.4	42.6		10.0	39.1			52.7			52.7	
Actuated g/C Ratio	0.10	0.39		0.09	0.36			0.48			0.48	
v/c Ratio	0.42	0.58		0.27	0.46			0.56			0.78	
Control Delay	49.7	35.1		48.1	33.5			20.4			27.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	49.7	35.1		48.1	33.5			20.4			27.1	
LOS	D	D		D	C			C			C	
Approach Delay		37.4			35.3			20.4			27.1	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 103 (94%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 28.1	Intersection LOS: C
Intersection Capacity Utilization 82.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 49: Mallory St & Mercury Blvd



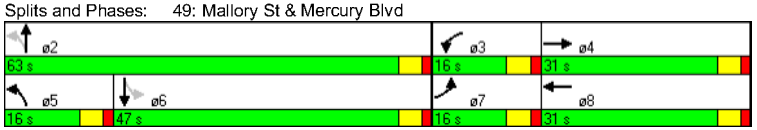
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1849		1770	1830			3492			3474	
Flt Permitted	0.95	1.00		0.95	1.00			0.88			0.71	
Satd. Flow (perm)	1770	1849		1770	1830			3061			2485	
Volume (vph)	69	358	18	39	240	32	26	644	57	83	742	85
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	398	20	43	267	36	29	716	63	92	824	94
RTOR Reduction (vph)	0	1	0	0	4	0	0	7	0	0	6	0
Lane Group Flow (vph)	77	417	0	43	299	0	0	801	0	0	1004	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	8.1	38.7		5.6	36.2			50.7			50.7	
Effective Green, g (s)	10.1	40.7		7.6	38.2			52.7			52.7	
Actuated g/C Ratio	0.09	0.37		0.07	0.35			0.48			0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	163	684		122	636			1466			1191	
v/s Ratio Prot	c0.04	c0.23		0.02	0.16							
v/s Ratio Perm								0.26			c0.40	
v/c Ratio	0.47	0.61		0.35	0.47			0.55			0.84	
Uniform Delay, d1	47.4	28.2		48.9	28.0			20.2			25.0	
Progression Factor	0.98	1.02		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.9	3.6		1.8	2.5			0.4			5.6	
Delay (s)	48.6	32.2		50.6	30.5			20.6			30.6	
Level of Service	D	C		D	C			C			C	
Approach Delay (s)		34.8			33.0			20.6			30.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.993			0.982			0.988			0.986	
Flt Protected	0.950			0.950				0.998			0.995	
Satd. Flow (prot)	1770	3514	0	1770	3476	0	0	3490	0	0	3472	0
Flt Permitted	0.950			0.950				0.861			0.775	
Satd. Flow (perm)	1770	3514	0	1770	3476	0	0	3011	0	0	2704	0
Satd. Flow (RTOR)		4			13			13			12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	69	358	18	39	240	32	26	644	57	83	742	85
Adj. Flow (vph)	77	398	20	43	267	36	29	716	63	92	824	94
Lane Group Flow (vph)	77	418	0	43	303	0	0	808	0	0	1010	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	16.0	31.0	0.0	16.0	31.0	0.0	16.0	63.0	0.0	47.0	47.0	0.0
Act Effct Green (s)	11.4	42.6		10.0	39.1			52.7			52.7	
Actuated g/C Ratio	0.10	0.39		0.09	0.36			0.48			0.48	
v/c Ratio	0.42	0.31		0.27	0.24			0.56			0.78	
Control Delay	49.6	33.9		48.1	27.8			20.4			27.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	49.6	33.9		48.1	27.8			20.4			27.1	
LOS	D	C		D	C			C			C	
Approach Delay		36.3			30.3			20.4			27.1	
Approach LOS		D			C			C			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 76 (69%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 27.2	Intersection LOS: C
Intersection Capacity Utilization 73.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 49: Mallory St & Mercury Blvd



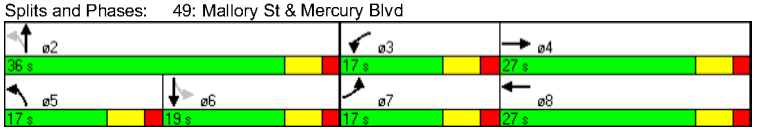
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	3514		1770	3476			3492			3474	
Flt Permitted	0.95	1.00		0.95	1.00			0.88			0.71	
Satd. Flow (perm)	1770	3514		1770	3476			3061			2485	
Volume (vph)	69	358	18	39	240	32	26	644	57	83	742	85
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	398	20	43	267	36	29	716	63	92	824	94
RTOR Reduction (vph)	0	3	0	0	8	0	0	7	0	0	6	0
Lane Group Flow (vph)	77	415	0	43	295	0	0	801	0	0	1004	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	8.1	38.7		5.6	36.2			50.7			50.7	
Effective Green, g (s)	10.1	40.7		7.6	38.2			52.7			52.7	
Actuated g/C Ratio	0.09	0.37		0.07	0.35			0.48			0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	163	1300		122	1207			1466			1191	
v/s Ratio Prot	c0.04	c0.12		0.02	0.08							
v/s Ratio Perm								0.26			c0.40	
v/c Ratio	0.47	0.32		0.35	0.24			0.55			0.84	
Uniform Delay, d1	47.4	24.8		48.9	25.6			20.2			25.0	
Progression Factor	0.97	1.24		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.1	0.6		1.8	0.5			0.4			5.6	
Delay (s)	48.3	31.3		50.6	26.1			20.6			30.6	
Level of Service	D	C		D	C			C			C	
Approach Delay (s)		33.9			29.1			20.6			30.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.983			0.975			0.975			0.942	
Flt Protected	0.950			0.950				0.991			0.988	
Satd. Flow (prot)	1770	1831	0	1770	1816	0	0	3420	0	0	3294	0
Flt Permitted	0.950			0.950				0.921			0.851	
Satd. Flow (perm)	1770	1831	0	1770	1816	0	0	3178	0	0	2837	0
Satd. Flow (RTOR)		8			13			27			69	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	50	153	20	25	241	48	27	93	24	40	59	62
Adj. Flow (vph)	56	170	22	28	268	53	30	103	27	44	66	69
Lane Group Flow (vph)	56	192	0	28	321	0	0	160	0	0	179	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	17.0	27.0	0.0	17.0	27.0	0.0	17.0	36.0	0.0	19.0	19.0	0.0
Act Effct Green (s)	10.9	56.8		9.7	53.3			11.6			11.6	
Actuated g/C Ratio	0.14	0.71		0.12	0.67			0.14			0.14	
v/c Ratio	0.23	0.15		0.13	0.26			0.33			0.38	
Control Delay	24.9	8.9		31.6	7.8			25.1			19.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	24.9	8.9		31.6	7.8			25.1			19.7	
LOS	C	A		C	A			C			B	
Approach Delay		12.5			9.7			25.1			19.7	
Approach LOS		B			A			C			B	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 4 (5%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 41.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 49: Mallory St & Mercury Blvd



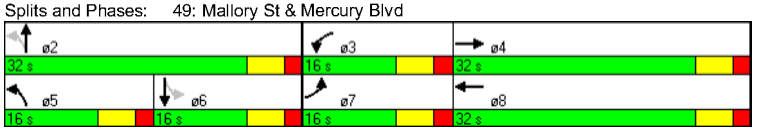
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frt	1.00	0.98		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1770	1831		1770	1817			3418			3294	
Flt Permitted	0.95	1.00		0.95	1.00			0.87			0.84	
Satd. Flow (perm)	1770	1831		1770	1817			2990			2804	
Volume (vph)	50	153	20	25	241	48	27	93	24	40	59	62
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	170	22	28	268	53	30	103	27	44	66	69
RTOR Reduction (vph)	0	3	0	0	5	0	0	23	0	0	59	0
Lane Group Flow (vph)	56	189	0	28	316	0	0	137	0	0	120	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	5.5	50.2		3.2	47.9			8.6			8.6	
Effective Green, g (s)	8.5	53.2		6.2	50.9			11.6			11.6	
Actuated g/C Ratio	0.11	0.67		0.08	0.64			0.14			0.14	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	188	1218		137	1156			434			407	
v/s Ratio Prot	c0.03	0.10		0.02	c0.17							
v/s Ratio Perm								c0.05			0.04	
v/c Ratio	0.30	0.16		0.20	0.27			0.32			0.29	
Uniform Delay, d1	33.0	5.0		34.6	6.4			30.6			30.5	
Progression Factor	0.78	1.59		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.9	0.3		0.7	0.6			0.4			0.4	
Delay (s)	26.7	8.2		35.3	7.0			31.1			31.0	
Level of Service	C	A		D	A			C			C	
Approach Delay (s)		12.4			9.3			31.1			31.0	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.986			0.980			0.975			0.942	
Flt Protected	0.950			0.950				0.991			0.988	
Satd. Flow (prot)	1770	1837	0	1770	1825	0	0	3420	0	0	3294	0
Flt Permitted	0.950			0.950				0.921			0.845	
Satd. Flow (perm)	1770	1837	0	1770	1825	0	0	3178	0	0	2817	0
Satd. Flow (RTOR)		7			11			27			69	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	50	192	20	25	303	48	27	93	24	40	59	62
Adj. Flow (vph)	56	213	22	28	337	53	30	103	27	44	66	69
Lane Group Flow (vph)	56	235	0	28	390	0	0	160	0	0	179	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	16.0	32.0	0.0	16.0	32.0	0.0	16.0	32.0	0.0	16.0	16.0	0.0
Act Effct Green (s)	11.0	56.7		9.7	53.2			11.7			11.7	
Actuated g/C Ratio	0.14	0.71		0.12	0.66			0.15			0.15	
v/c Ratio	0.23	0.18		0.13	0.32			0.33			0.38	
Control Delay	34.5	5.6		31.6	8.4			25.0			20.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	34.5	5.6		31.6	8.4			25.0			20.2	
LOS	C	A		C	A			C			C	
Approach Delay		11.1			10.0			25.0			20.2	
Approach LOS		B			A			C			C	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 26 (33%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 44.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 49: Mallory St & Mercury Blvd



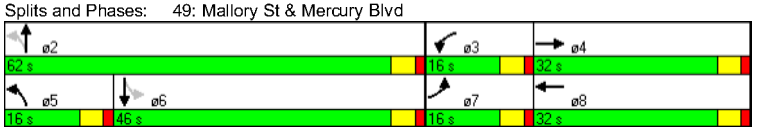
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1770	1837		1770	1825			3418			3294	
Flt Permitted	0.95	1.00		0.95	1.00			0.87			0.84	
Satd. Flow (perm)	1770	1837		1770	1825			2991			2805	
Volume (vph)	50	192	20	25	303	48	27	93	24	40	59	62
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	213	22	28	337	53	30	103	27	44	66	69
RTOR Reduction (vph)	0	2	0	0	4	0	0	23	0	0	59	0
Lane Group Flow (vph)	56	233	0	28	386	0	0	137	0	0	120	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	5.5	50.1		3.2	47.8			8.7			8.7	
Effective Green, g (s)	8.5	53.1		6.2	50.8			11.7			11.7	
Actuated g/C Ratio	0.11	0.66		0.08	0.63			0.15			0.15	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	188	1219		137	1159			437			410	
v/s Ratio Prot	c0.03	0.13		0.02	c0.21							
v/s Ratio Perm								c0.05			0.04	
v/c Ratio	0.30	0.19		0.20	0.33			0.31			0.29	
Uniform Delay, d1	33.0	5.2		34.6	6.8			30.6			30.5	
Progression Factor	1.10	0.93		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.9	0.3		0.7	0.8			0.4			0.4	
Delay (s)	37.1	5.2		35.3	7.5			31.0			30.9	
Level of Service	D	A		D	A			C			C	
Approach Delay (s)		11.3			9.4			31.0			30.9	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.981			0.979			0.996			0.987	
Flt Protected	0.950			0.950				0.998			0.998	
Satd. Flow (prot)	1770	1827	0	1770	1824	0	0	3518	0	0	3486	0
Flt Permitted	0.950			0.950				0.674			0.833	
Satd. Flow (perm)	1770	1827	0	1770	1824	0	0	2376	0	0	2910	0
Satd. Flow (RTOR)		7			7			3			10	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	81	233	34	25	341	55	41	960	24	47	988	95
Adj. Flow (vph)	90	259	38	28	379	61	46	1067	27	52	1098	106
Lane Group Flow (vph)	90	297	0	28	440	0	0	1140	0	0	1256	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	16.0	32.0	0.0	16.0	32.0	0.0	16.0	62.0	0.0	46.0	46.0	0.0
Act Effct Green (s)	11.7	37.1		9.2	32.6			59.0			59.0	
Actuated g/C Ratio	0.11	0.34		0.08	0.30			0.54			0.54	
v/c Ratio	0.48	0.48		0.19	0.81			0.89			0.80	
Control Delay	51.2	37.5		47.8	49.7			33.3			25.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	51.2	37.5		47.8	49.7			33.3			25.6	
LOS	D	D		D	D			C			C	
Approach Delay		40.7			49.6			33.3			25.6	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 103 (94%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 33.5	Intersection LOS: C
Intersection Capacity Utilization 99.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 49: Mallory St & Mercury Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frt	1.00	0.98		1.00	0.98			1.00			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1827		1770	1824			3520			3487	
Flt Permitted	0.95	1.00		0.95	1.00			0.77			0.78	
Satd. Flow (perm)	1770	1827		1770	1824			2699			2727	
Volume (vph)	81	233	34	25	341	55	41	960	24	47	988	95
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	259	38	28	379	61	46	1067	27	52	1098	106
RTOR Reduction (vph)	0	5	0	0	5	0	0	1	0	0	5	0
Lane Group Flow (vph)	90	292	0	28	435	0	0	1139	0	0	1251	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	8.4	33.1		4.9	29.6			57.0			57.0	
Effective Green, g (s)	10.4	35.1		6.9	31.6			59.0			59.0	
Actuated g/C Ratio	0.09	0.32		0.06	0.29			0.54			0.54	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	167	583		111	524			1448			1463	
v/s Ratio Prot	c0.05	0.16		0.02	c0.24							
v/s Ratio Perm								0.42			c0.46	
v/c Ratio	0.54	0.50		0.25	0.83			0.79			0.86	
Uniform Delay, d1	47.5	30.4		49.1	36.7			20.4			21.8	
Progression Factor	0.98	1.15		1.00	1.00			1.00			1.00	
Incremental Delay, d2	3.1	2.8		1.2	14.2			2.9			5.1	
Delay (s)	49.7	37.9		50.3	50.9			23.3			27.0	
Level of Service	D	D		D	D			C			C	
Approach Delay (s)		40.6			50.8			23.3			27.0	
Approach LOS		D			D			C			C	

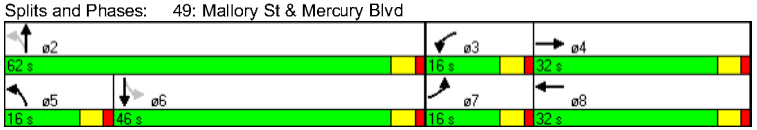
Intersection Summary			
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.981			0.979			0.996			0.987	
Flt Protected	0.950			0.950				0.998			0.998	
Satd. Flow (prot)	1770	3472	0	1770	3465	0	0	3518	0	0	3486	0
Flt Permitted	0.950			0.950				0.674			0.833	
Satd. Flow (perm)	1770	3472	0	1770	3465	0	0	2376	0	0	2910	0
Satd. Flow (RTOR)		14			16			3			10	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	81	233	34	25	341	55	41	960	24	47	988	95
Adj. Flow (vph)	90	259	38	28	379	61	46	1067	27	52	1098	106
Lane Group Flow (vph)	90	297	0	28	440	0	0	1140	0	0	1256	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Total Split (s)	16.0	32.0	0.0	16.0	32.0	0.0	16.0	62.0	0.0	46.0	46.0	0.0
Act Effct Green (s)	11.8	37.1		9.2	32.6			59.0			59.0	
Actuated g/C Ratio	0.11	0.34		0.08	0.30			0.54			0.54	
v/c Ratio	0.48	0.25		0.19	0.42			0.89			0.80	
Control Delay	56.8	28.1		47.8	32.7			33.4			25.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	56.8	28.1		47.8	32.7			33.4			25.6	
LOS	E	C		D	C			C			C	
Approach Delay		34.7			33.6			33.4			25.6	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 103 (94%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 30.6 Intersection LOS: C
Intersection Capacity Utilization 89.2% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 49: Mallory St & Mercury Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.98		1.00	0.98			1.00			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	3471		1770	3466			3520			3487	
Flt Permitted	0.95	1.00		0.95	1.00			0.77			0.78	
Satd. Flow (perm)	1770	3471		1770	3466			2699			2727	
Volume (vph)	81	233	34	25	341	55	41	960	24	47	988	95
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	259	38	28	379	61	46	1067	27	52	1098	106
RTOR Reduction (vph)	0	10	0	0	11	0	0	1	0	0	5	0
Lane Group Flow (vph)	90	287	0	28	429	0	0	1139	0	0	1251	0
Turn Type	Prot			Prot			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	8.4	33.1		4.9	29.6			57.0			57.0	
Effective Green, g (s)	10.4	35.1		6.9	31.6			59.0			59.0	
Actuated g/C Ratio	0.09	0.32		0.06	0.29			0.54			0.54	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	167	1108		111	996			1448			1463	
v/s Ratio Prot	c0.05	0.08		0.02	c0.12							
v/s Ratio Perm								0.42			c0.46	
v/c Ratio	0.54	0.26		0.25	0.43			0.79			0.86	
Uniform Delay, d1	47.5	27.8		49.1	31.9			20.4			21.8	
Progression Factor	1.09	1.03		1.00	1.00			1.00			1.00	
Incremental Delay, d2	3.3	0.6		1.2	1.4			2.9			5.1	
Delay (s)	55.3	29.2		50.3	33.2			23.4			27.0	
Level of Service	E	C		D	C			C			C	
Approach Delay (s)		35.2			34.3			23.4			27.0	
Approach LOS		D			C			C			C	

Intersection Summary

HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Traffic Analysis

Mallory Street/Atlantic Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	24	46	9	0	199	1	46	11	6	4	7	102
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	29	56	11	0	224	1	61	15	8	5	8	116
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	225			67			352	345	34	326	350	112
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	225			67			352	345	34	326	350	112
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			88	97	99	99	99	87
cM capacity (veh/h)	1341			1533			492	564	1032	577	561	919

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	57	39	112	113	84	128
Volume Left	29	0	0	0	61	5
Volume Right	0	11	0	1	8	116
cSH	1341	1700	1533	1700	530	867
Volume to Capacity	0.02	0.02	0.00	0.07	0.16	0.15
Queue Length 95th (ft)	2	0	0	0	14	13
Control Delay (s)	4.0	0.0	0.0	0.0	13.1	9.9
Lane LOS	A				B	A
Approach Delay (s)	2.4		0.0		13.1	9.9
Approach LOS					B	A

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	24	58	9	0	250	1	46	11	6	4	7	102
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	29	71	11	0	281	1	61	15	8	5	8	116
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	282			82			395	417	41	391	422	141
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	282			82			395	417	41	391	422	141
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			87	97	99	99	98	87
cM capacity (veh/h)	1277			1514			454	513	1021	518	510	881

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	65	46	140	142	84	128
Volume Left	29	0	0	0	61	5
Volume Right	0	11	0	1	8	116
cSH	1277	1700	1514	1700	490	824
Volume to Capacity	0.02	0.03	0.00	0.08	0.17	0.16
Queue Length 95th (ft)	2	0	0	0	15	14
Control Delay (s)	3.7	0.0	0.0	0.0	13.9	10.2
Lane LOS	A				B	B
Approach Delay (s)	2.1		0.0		13.9	10.2
Approach LOS					B	B

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	30.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	24	58	6	0	250	1	55	41	6	4	1	102
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	29	71	7	0	281	1	73	55	8	5	1	116
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	282			78			390	415	39	411	418	141
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	282			78			390	415	39	411	418	141
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			84	89	99	99	100	87
cM capacity (veh/h)	1277			1518			463	514	1024	471	512	881

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	65	43	140	142	136	122
Volume Left	29	0	0	0	73	5
Volume Right	0	7	0	1	8	116
cSH	1277	1700	1518	1700	499	848
Volume to Capacity	0.02	0.03	0.00	0.08	0.27	0.14
Queue Length 95th (ft)	2	0	0	0	27	12
Control Delay (s)	3.7	0.0	0.0	0.0	14.9	10.0
Lane LOS	A				B	A
Approach Delay (s)	2.2		0.0		14.9	10.0
Approach LOS					B	A

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	24	58	6	0	250	1	55	41	6	4	1	102
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	29	71	7	0	281	1	73	55	8	5	1	116
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	282			78			390	415	39	411	418	141
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	282			78			390	415	39	411	418	141
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			84	89	99	99	100	87
cM capacity (veh/h)	1277			1518			463	514	1024	471	512	881

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	65	43	140	142	136	122
Volume Left	29	0	0	0	73	5
Volume Right	0	7	0	1	8	116
cSH	1277	1700	1518	1700	499	848
Volume to Capacity	0.02	0.03	0.00	0.08	0.27	0.14
Queue Length 95th (ft)	2	0	0	0	27	12
Control Delay (s)	3.7	0.0	0.0	0.0	14.9	10.0
Lane LOS	A				B	A
Approach Delay (s)	2.2		0.0		14.9	10.0
Approach LOS					B	A

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	31	127	27	1	54	2	12	4	2	11	14	16
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	38	155	33	1	61	2	16	5	3	12	16	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	63			188			306	312	94	222	327	31
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	63			188			306	312	94	222	327	31
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			97	99	100	98	97	98
cM capacity (veh/h)	1538			1384			588	586	945	694	575	1035

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	115	110	31	33	24	47
Volume Left	38	0	1	0	16	12
Volume Right	0	33	0	2	3	18
cSH	1538	1700	1384	1700	614	737
Volume to Capacity	0.02	0.06	0.00	0.02	0.04	0.06
Queue Length 95th (ft)	2	0	0	0	3	5
Control Delay (s)	2.6	0.0	0.3	0.0	11.1	10.2
Lane LOS	A		A		B	B
Approach Delay (s)	1.3		0.1		11.1	10.2
Approach LOS					B	B

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	18.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	31	160	27	1	68	2	12	4	2	11	14	16
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	38	195	33	1	76	2	16	5	3	12	16	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	79			228			354	368	114	258	383	39
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	79			228			354	368	114	258	383	39
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			97	99	100	98	97	98
cM capacity (veh/h)	1518			1337			543	545	917	654	534	1024

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	135	130	39	40	24	47
Volume Left	38	0	1	0	16	12
Volume Right	0	33	0	2	3	18
cSH	1518	1700	1337	1700	569	699
Volume to Capacity	0.02	0.08	0.00	0.02	0.04	0.07
Queue Length 95th (ft)	2	0	0	0	3	5
Control Delay (s)	2.2	0.0	0.2	0.0	11.6	10.5
Lane LOS	A		A		B	B
Approach Delay (s)	1.1		0.1		11.6	10.5
Approach LOS					B	B

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	31	160	54	1	68	2	33	80	2	11	108	16
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	38	195	66	1	76	2	44	107	3	12	123	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	79			261			424	385	130	309	416	39
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	79			261			424	385	130	309	416	39
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			89	80	100	98	76	98
cM capacity (veh/h)	1518			1300			404	534	895	514	512	1024

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	135	163	39	40	153	153
Volume Left	38	0	1	0	44	12
Volume Right	0	66	0	2	3	18
cSH	1518	1700	1300	1700	492	544
Volume to Capacity	0.02	0.10	0.00	0.02	0.31	0.28
Queue Length 95th (ft)	2	0	0	0	33	29
Control Delay (s)	2.2	0.0	0.2	0.0	15.6	14.2
Lane LOS	A		A		C	B
Approach Delay (s)	1.0		0.1		15.6	14.2
Approach LOS					C	B

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	31	160	54	1	68	2	33	80	2	11	108	16
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	38	195	66	1	76	2	44	107	3	12	123	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	79			261			424	385	130	309	416	39
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	79			261			424	385	130	309	416	39
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			89	80	100	98	76	98
cM capacity (veh/h)	1518			1300			404	534	895	514	512	1024

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	135	163	39	40	153	153
Volume Left	38	0	1	0	44	12
Volume Right	0	66	0	2	3	18
cSH	1518	1700	1300	1700	492	544
Volume to Capacity	0.02	0.10	0.00	0.02	0.31	0.28
Queue Length 95th (ft)	2	0	0	0	33	29
Control Delay (s)	2.2	0.0	0.2	0.0	15.6	14.2
Lane LOS	A		A		C	B
Approach Delay (s)	1.0		0.1		15.6	14.2
Approach LOS					C	B

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	16	111	13	2	107	4	20	10	2	8	20	36
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	20	135	16	2	120	4	27	13	3	9	23	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	125			151			299	312	76	243	317	62
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	125			151			299	312	76	243	317	62
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			95	98	100	99	96	96
cM capacity (veh/h)	1460			1427			580	593	970	669	589	989

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	87	84	62	65	43	73
Volume Left	20	0	2	0	27	9
Volume Right	0	16	0	4	3	41
cSH	1460	1700	1427	1700	599	778
Volume to Capacity	0.01	0.05	0.00	0.04	0.07	0.09
Queue Length 95th (ft)	1	0	0	0	6	8
Control Delay (s)	1.8	0.0	0.3	0.0	11.5	10.1
Lane LOS	A		A		B	B
Approach Delay (s)	0.9		0.1		11.5	10.1
Approach LOS					B	B

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	20.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	16	140	13	2	134	4	20	10	2	8	20	36
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	20	171	16	2	151	4	27	13	3	9	23	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	155			187			350	377	93	291	383	78
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	155			187			350	377	93	291	383	78
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			95	98	100	99	96	96
cM capacity (veh/h)	1423			1385			532	545	945	618	541	968

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	105	101	78	80	43	73
Volume Left	20	0	2	0	27	9
Volume Right	0	16	0	4	3	41
cSH	1423	1700	1385	1700	551	734
Volume to Capacity	0.01	0.06	0.00	0.05	0.08	0.10
Queue Length 95th (ft)	1	0	0	0	6	8
Control Delay (s)	1.5	0.0	0.2	0.0	12.1	10.4
Lane LOS	A		A		B	B
Approach Delay (s)	0.8		0.1		12.1	10.4
Approach LOS					B	B

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	24.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	16	140	61	2	134	4	66	143	2	8	161	36
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	20	171	74	2	151	4	88	191	3	9	183	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	155			245			459	407	123	380	441	78
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	155			245			459	407	123	380	441	78
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			73	64	100	98	63	96
cM capacity (veh/h)	1423			1318			329	524	905	391	501	968

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	105	160	78	80	281	233
Volume Left	20	0	2	0	88	9
Volume Right	0	74	0	4	3	41
cSH	1423	1700	1318	1700	444	541
Volume to Capacity	0.01	0.09	0.00	0.05	0.63	0.43
Queue Length 95th (ft)	1	0	0	0	107	54
Control Delay (s)	1.5	0.0	0.2	0.0	26.1	16.6
Lane LOS	A		A		D	C
Approach Delay (s)	0.6		0.1		26.1	16.6
Approach LOS					D	C

Intersection Summary			
Average Delay	12.2		
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	16	140	61	2	134	4	66	143	2	8	161	36
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.75	0.75	0.75	0.88	0.88	0.88
Hourly flow rate (vph)	20	171	74	2	151	4	88	191	3	9	183	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	155			245			459	407	123	380	441	78
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	155			245			459	407	123	380	441	78
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			73	64	100	98	63	96
cM capacity (veh/h)	1423			1318			329	524	905	391	501	968

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	105	160	78	80	281	233
Volume Left	20	0	2	0	88	9
Volume Right	0	74	0	4	3	41
cSH	1423	1700	1318	1700	444	541
Volume to Capacity	0.01	0.09	0.00	0.05	0.63	0.43
Queue Length 95th (ft)	1	0	0	0	107	54
Control Delay (s)	1.5	0.0	0.2	0.0	26.1	16.6
Lane LOS	A		A		D	C
Approach Delay (s)	0.6		0.1		26.1	16.6
Approach LOS					D	C

Intersection Summary			
Average Delay	12.2		
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

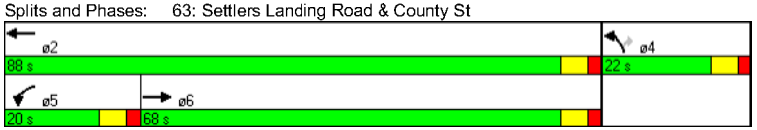
Traffic Analysis

Woodland Road/County Street

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		329				36
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	418	442	40	1299	88	28
Adj. Flow (vph)	464	491	46	1493	113	36
Lane Group Flow (vph)	464	491	46	1493	113	36
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Total Split (s)	68.0	0.0	20.0	88.0	22.0	22.0
Act Effct Green (s)	80.2	110.0	11.2	92.1	11.9	11.9
Actuated g/C Ratio	0.73	1.00	0.10	0.84	0.11	0.11
v/c Ratio	0.18	0.31	0.25	0.50	0.31	0.18
Control Delay	2.4	0.5	46.2	3.3	45.6	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.4	0.5	46.2	3.3	45.6	15.0
LOS	A	A	D	A	D	B
Approach Delay	1.5			4.6	38.2	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 38 (35%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 5.4	Intersection LOS: A
Intersection Capacity Utilization 45.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



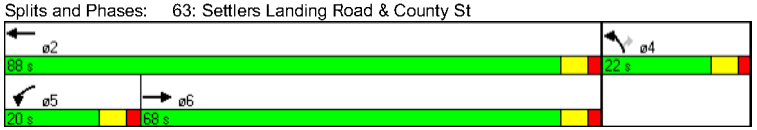
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	418	442	40	1299	88	28
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	464	491	46	1493	113	36
RTOR Reduction (vph)	0	0	0	0	0	32
Lane Group Flow (vph)	464	491	46	1493	113	4
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Actuated Green, G (s)	76.0	110.0	7.1	89.1	8.9	8.9
Effective Green, g (s)	79.0	110.0	10.1	92.1	11.9	11.9
Actuated g/C Ratio	0.72	1.00	0.09	0.84	0.11	0.11
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2542	1583	163	2963	371	171
v/s Ratio Prot	0.13		0.03	c0.42	0.03	
v/s Ratio Perm		c0.31				0.00
v/c Ratio	0.18	0.31	0.28	0.50	0.30	0.02
Uniform Delay, d1	5.0	0.0	46.6	2.5	45.2	43.9
Progression Factor	0.42	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.5	1.0	0.6	0.5	0.1
Delay (s)	2.2	0.5	47.5	3.1	45.7	43.9
Level of Service	A	A	D	A	D	D
Approach Delay (s)	1.3			4.5	45.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	5.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	3.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		262				36
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	525	442	40	1633	88	28
Adj. Flow (vph)	583	491	46	1877	113	36
Lane Group Flow (vph)	583	491	46	1877	113	36
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Total Split (s)	68.0	0.0	20.0	88.0	22.0	22.0
Act Effct Green (s)	80.2	110.0	11.2	92.1	11.9	11.9
Actuated g/C Ratio	0.73	1.00	0.10	0.84	0.11	0.11
v/c Ratio	0.23	0.31	0.25	0.63	0.31	0.18
Control Delay	1.3	0.5	46.2	4.4	45.6	15.0
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	1.3	0.5	46.2	4.5	45.6	15.0
LOS	A	A	D	A	D	B
Approach Delay	0.9			5.5	38.2	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 67 (61%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 5.5	Intersection LOS: A
Intersection Capacity Utilization 55.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



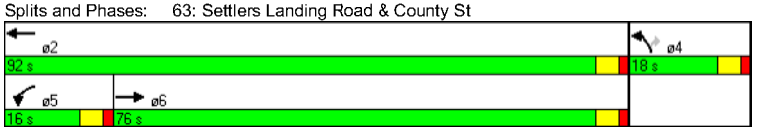
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	525	442	40	1633	88	28
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	583	491	46	1877	113	36
RTOR Reduction (vph)	0	0	0	0	0	32
Lane Group Flow (vph)	583	491	46	1877	113	4
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Actuated Green, G (s)	76.0	110.0	7.1	89.1	8.9	8.9
Effective Green, g (s)	79.0	110.0	10.1	92.1	11.9	11.9
Actuated g/C Ratio	0.72	1.00	0.09	0.84	0.11	0.11
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2542	1583	163	2963	371	171
v/s Ratio Prot	0.16		0.03	c0.53	0.03	
v/s Ratio Perm		c0.31				0.00
v/c Ratio	0.23	0.31	0.28	0.63	0.30	0.02
Uniform Delay, d1	5.2	0.0	46.6	3.1	45.2	43.9
Progression Factor	0.19	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.5	1.0	1.0	0.5	0.1
Delay (s)	1.2	0.5	47.5	4.1	45.7	43.9
Level of Service	A	A	D	A	D	D
Approach Delay (s)	0.9			5.2	45.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	5.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	3.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		315				36
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	424	429	40	1716	107	28
Adj. Flow (vph)	471	477	46	1972	137	36
Lane Group Flow (vph)	471	477	46	1972	137	36
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Total Split (s)	76.0	0.0	16.0	92.0	18.0	18.0
Act Effct Green (s)	81.2	110.0	10.3	92.3	11.7	11.7
Actuated g/C Ratio	0.74	1.00	0.09	0.84	0.11	0.11
v/c Ratio	0.18	0.30	0.28	0.66	0.38	0.18
Control Delay	1.1	0.4	48.1	4.7	47.0	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.1	0.4	48.1	4.7	47.0	15.4
LOS	A	A	D	A	D	B
Approach Delay	0.8			5.7	40.4	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 42 (38%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 6.1	Intersection LOS: A
Intersection Capacity Utilization 57.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



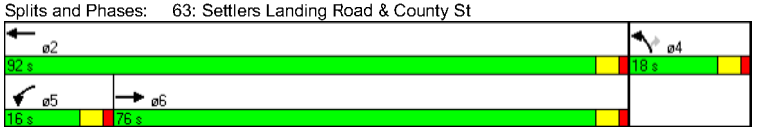
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	424	429	40	1716	107	28
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	471	477	46	1972	137	36
RTOR Reduction (vph)	0	0	0	0	0	32
Lane Group Flow (vph)	471	477	46	1972	137	4
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Actuated Green, G (s)	78.1	110.0	7.2	90.3	9.7	9.7
Effective Green, g (s)	80.1	110.0	9.2	92.3	11.7	11.7
Actuated g/C Ratio	0.73	1.00	0.08	0.84	0.11	0.11
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2577	1583	148	2970	365	168
v/s Ratio Prot	0.13		0.03	c0.56	0.04	
v/s Ratio Perm		c0.30				0.00
v/c Ratio	0.18	0.30	0.31	0.66	0.38	0.02
Uniform Delay, d1	4.7	0.0	47.4	3.2	45.7	44.0
Progression Factor	0.18	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.5	1.2	1.2	0.7	0.1
Delay (s)	1.0	0.5	48.6	4.4	46.4	44.1
Level of Service	A	A	D	A	D	D
Approach Delay (s)	0.7			5.4	45.9	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	6.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	3.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		315				36
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	424	429	40	1716	107	28
Adj. Flow (vph)	471	477	46	1972	137	36
Lane Group Flow (vph)	471	477	46	1972	137	36
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Total Split (s)	76.0	0.0	16.0	92.0	18.0	18.0
Act Effct Green (s)	81.2	110.0	10.3	92.4	11.6	11.6
Actuated g/C Ratio	0.74	1.00	0.09	0.84	0.11	0.11
v/c Ratio	0.18	0.30	0.28	0.66	0.38	0.18
Control Delay	1.4	0.5	48.1	4.7	47.1	15.5
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	1.4	0.5	48.1	5.1	47.1	15.5
LOS	A	A	D	A	D	B
Approach Delay	0.9			6.1	40.5	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 39 (35%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 57.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



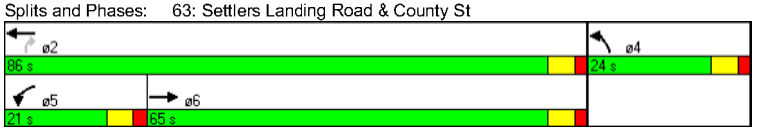
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	424	429	40	1716	107	28
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	471	477	46	1972	137	36
RTOR Reduction (vph)	0	0	0	0	0	32
Lane Group Flow (vph)	471	477	46	1972	137	4
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Actuated Green, G (s)	78.2	110.0	7.2	90.4	9.6	9.6
Effective Green, g (s)	80.2	110.0	9.2	92.4	11.6	11.6
Actuated g/C Ratio	0.73	1.00	0.08	0.84	0.11	0.11
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2580	1583	148	2973	362	167
v/s Ratio Prot	0.13		0.03	c0.56	0.04	
v/s Ratio Perm		c0.30				0.00
v/c Ratio	0.18	0.30	0.31	0.66	0.38	0.02
Uniform Delay, d1	4.7	0.0	47.4	3.2	45.8	44.1
Progression Factor	0.24	1.00	1.00	1.00	1.00	1.01
Incremental Delay, d2	0.1	0.5	1.2	1.2	0.7	0.1
Delay (s)	1.3	0.5	48.6	4.4	46.6	44.5
Level of Service	A	A	D	A	D	D
Approach Delay (s)	0.9			5.4	46.1	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	6.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	3.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		77				51
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	990	245	24	674	149	40
Adj. Flow (vph)	1100	272	28	775	191	51
Lane Group Flow (vph)	1100	272	28	775	191	51
Turn Type		Free	Prot			custom
Protected Phases	6		5	2	4	
Permitted Phases		Free				2
Total Split (s)	65.0	0.0	21.0	86.0	24.0	86.0
Act Effct Green (s)	81.3	110.0	10.2	89.8	14.2	89.8
Actuated g/C Ratio	0.74	1.00	0.09	0.82	0.13	0.82
v/c Ratio	0.42	0.17	0.17	0.27	0.43	0.04
Control Delay	6.8	0.2	46.2	2.8	44.9	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	0.2	46.2	2.8	44.9	0.8
LOS	A	A	D	A	D	A
Approach Delay	5.5			4.3	35.6	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 6 (5%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 38.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



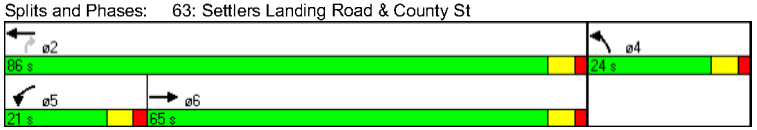
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	990	245	24	674	149	40
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	1100	272	28	775	191	51
RTOR Reduction (vph)	0	0	0	0	0	9
Lane Group Flow (vph)	1100	272	28	775	191	42
Turn Type		Free	Prot			custom
Protected Phases	6		5	2	4	
Permitted Phases		Free				2
Actuated Green, G (s)	75.9	110.0	4.9	86.8	11.2	86.8
Effective Green, g (s)	78.9	110.0	7.9	89.8	14.2	89.8
Actuated g/C Ratio	0.72	1.00	0.07	0.82	0.13	0.82
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2538	1583	127	2889	443	1292
v/s Ratio Prot	c0.31		0.02	c0.22	c0.06	
v/s Ratio Perm		0.17				0.03
v/c Ratio	0.43	0.17	0.22	0.27	0.43	0.03
Uniform Delay, d1	6.4	0.0	48.1	2.4	44.2	1.9
Progression Factor	0.95	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.2	0.9	0.2	0.7	0.0
Delay (s)	6.5	0.2	49.0	2.6	44.9	2.0
Level of Service	A	A	D	A	D	A
Approach Delay (s)	5.3			4.2	35.8	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	8.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		61				51
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1244	245	24	847	149	40
Adj. Flow (vph)	1382	272	28	974	191	51
Lane Group Flow (vph)	1382	272	28	974	191	51
Turn Type		Free	Prot			custom
Protected Phases	6		5	2	4	
Permitted Phases		Free				2
Total Split (s)	65.0	0.0	21.0	86.0	24.0	86.0
Act Effct Green (s)	81.3	110.0	10.2	89.8	14.2	89.8
Actuated g/C Ratio	0.74	1.00	0.09	0.82	0.13	0.82
v/c Ratio	0.53	0.17	0.17	0.34	0.43	0.04
Control Delay	2.1	0.2	46.2	3.0	44.9	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.1	0.2	46.2	3.0	44.9	0.8
LOS	A	A	D	A	D	A
Approach Delay	1.8			4.3	35.6	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 8 (7%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 5.5	Intersection LOS: A
Intersection Capacity Utilization 45.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



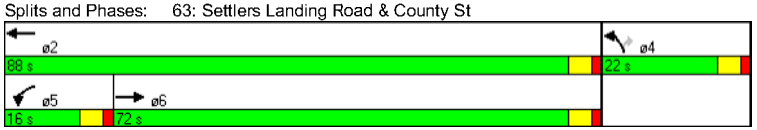
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	1244	245	24	847	149	40
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	1382	272	28	974	191	51
RTOR Reduction (vph)	0	0	0	0	0	9
Lane Group Flow (vph)	1382	272	28	974	191	42
Turn Type		Free	Prot			custom
Protected Phases	6		5	2	4	
Permitted Phases		Free				2
Actuated Green, G (s)	75.9	110.0	4.9	86.8	11.2	86.8
Effective Green, g (s)	78.9	110.0	7.9	89.8	14.2	89.8
Actuated g/C Ratio	0.72	1.00	0.07	0.82	0.13	0.82
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2538	1583	127	2889	443	1292
v/s Ratio Prot	c0.39		0.02	c0.28	c0.06	
v/s Ratio Perm		0.17				0.03
v/c Ratio	0.54	0.17	0.22	0.34	0.43	0.03
Uniform Delay, d1	7.2	0.0	48.1	2.6	44.2	1.9
Progression Factor	0.19	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.2	0.9	0.3	0.7	0.0
Delay (s)	2.1	0.2	49.0	2.9	44.9	2.0
Level of Service	A	A	D	A	D	A
Approach Delay (s)	1.8			4.2	35.8	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	5.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		59				51
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1591	304	24	1111	196	40
Adj. Flow (vph)	1768	338	28	1277	251	51
Lane Group Flow (vph)	1768	338	28	1277	251	51
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Total Split (s)	72.0	0.0	16.0	88.0	22.0	22.0
Act Effct Green (s)	81.0	110.0	9.2	88.9	15.1	15.1
Actuated g/C Ratio	0.74	1.00	0.08	0.81	0.14	0.14
v/c Ratio	0.68	0.21	0.19	0.45	0.53	0.19
Control Delay	5.2	0.1	47.8	4.0	49.6	16.0
Queue Delay	1.3	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	0.1	47.8	4.0	49.6	16.0
LOS	A	A	D	A	D	B
Approach Delay	5.5			4.9	43.9	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 8 (7%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 56.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



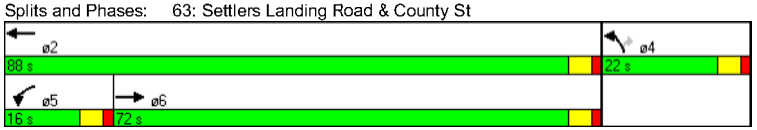
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	1591	304	24	1111	196	40
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	1768	338	28	1277	251	51
RTOR Reduction (vph)	0	0	0	0	0	44
Lane Group Flow (vph)	1768	338	28	1277	251	7
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Actuated Green, G (s)	77.0	110.0	4.9	86.9	13.1	13.1
Effective Green, g (s)	79.0	110.0	6.9	88.9	15.1	15.1
Actuated g/C Ratio	0.72	1.00	0.06	0.81	0.14	0.14
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2542	1583	111	2860	471	217
v/s Ratio Prot	c0.50		0.02	c0.36	c0.07	
v/s Ratio Perm		0.21				0.00
v/c Ratio	0.70	0.21	0.25	0.45	0.53	0.03
Uniform Delay, d1	8.7	0.0	49.1	3.2	44.2	41.1
Progression Factor	0.50	1.00	1.00	1.00	1.09	1.33
Incremental Delay, d2	0.4	0.1	1.2	0.5	1.2	0.1
Delay (s)	4.8	0.1	50.3	3.7	49.1	54.9
Level of Service	A	A	D	A	D	D
Approach Delay (s)	4.0			4.7	50.1	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	8.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		59				51
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1591	304	24	1111	196	40
Adj. Flow (vph)	1768	338	28	1277	251	51
Lane Group Flow (vph)	1768	338	28	1277	251	51
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Total Split (s)	72.0	0.0	16.0	88.0	22.0	22.0
Act Effct Green (s)	81.0	110.0	9.2	88.9	15.1	15.1
Actuated g/C Ratio	0.74	1.00	0.08	0.81	0.14	0.14
v/c Ratio	0.68	0.21	0.19	0.45	0.53	0.19
Control Delay	4.8	0.1	47.8	4.0	43.9	11.4
Queue Delay	0.8	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	0.1	47.8	4.0	43.9	11.4
LOS	A	A	D	A	D	B
Approach Delay	4.8			4.9	38.4	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 2 (2%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 7.6	Intersection LOS: A
Intersection Capacity Utilization 56.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



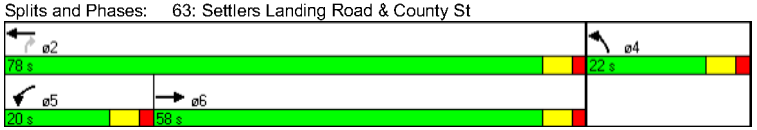
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	1591	304	24	1111	196	40
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	1768	338	28	1277	251	51
RTOR Reduction (vph)	0	0	0	0	0	44
Lane Group Flow (vph)	1768	338	28	1277	251	7
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Actuated Green, G (s)	77.0	110.0	4.9	86.9	13.1	13.1
Effective Green, g (s)	79.0	110.0	6.9	88.9	15.1	15.1
Actuated g/C Ratio	0.72	1.00	0.06	0.81	0.14	0.14
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2542	1583	111	2860	471	217
v/s Ratio Prot	c0.50		0.02	c0.36	c0.07	
v/s Ratio Perm		0.21				0.00
v/c Ratio	0.70	0.21	0.25	0.45	0.53	0.03
Uniform Delay, d1	8.7	0.0	49.1	3.2	44.2	41.1
Progression Factor	0.45	1.00	1.00	1.00	0.95	0.92
Incremental Delay, d2	0.6	0.1	1.2	0.5	1.2	0.1
Delay (s)	4.5	0.1	50.3	3.7	43.3	38.1
Level of Service	A	A	D	A	D	D
Approach Delay (s)	3.8			4.7	42.4	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	7.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		82				21
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	458	110	16	529	80	16
Adj. Flow (vph)	509	122	18	608	103	21
Lane Group Flow (vph)	509	122	18	608	103	21
Turn Type		Free	Prot			custom
Protected Phases	6		5	2	4	
Permitted Phases		Free				2
Total Split (s)	58.0	0.0	20.0	78.0	22.0	78.0
Act Effct Green (s)	77.3	100.0	9.5	82.8	11.2	82.8
Actuated g/C Ratio	0.77	1.00	0.10	0.83	0.11	0.83
v/c Ratio	0.19	0.08	0.11	0.21	0.27	0.02
Control Delay	2.2	0.1	41.4	2.1	40.8	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.2	0.1	41.4	2.1	40.8	0.8
LOS	A	A	D	A	D	A
Approach Delay	1.8			3.2	34.0	
Approach LOS	A			A	C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 78 (78%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.27	
Intersection Signal Delay: 5.3	Intersection LOS: A
Intersection Capacity Utilization 24.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



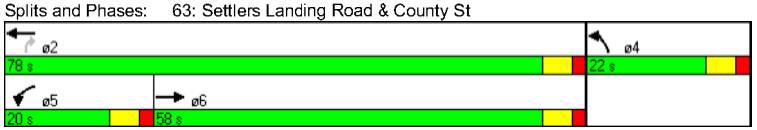
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	458	110	16	529	80	16
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	509	122	18	608	103	21
RTOR Reduction (vph)	0	0	0	0	0	4
Lane Group Flow (vph)	509	122	18	608	103	17
Turn Type		Free	Prot			custom
Protected Phases	6		5	2	4	
Permitted Phases		Free				2
Actuated Green, G (s)	70.7	100.0	3.1	79.8	8.2	79.8
Effective Green, g (s)	73.7	100.0	6.1	82.8	11.2	82.8
Actuated g/C Ratio	0.74	1.00	0.06	0.83	0.11	0.83
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2608	1583	108	2930	384	1311
v/s Ratio Prot	0.14		0.01	c0.17	c0.03	
v/s Ratio Perm		0.08				0.01
v/c Ratio	0.20	0.08	0.17	0.21	0.27	0.01
Uniform Delay, d1	4.0	0.0	44.5	1.8	40.6	1.5
Progression Factor	0.51	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.7	0.2	0.4	0.0
Delay (s)	2.2	0.1	45.3	1.9	41.0	1.5
Level of Service	A	A	D	A	D	A
Approach Delay (s)	1.8			3.2	34.3	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	5.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		65				21
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	576	110	16	665	80	16
Adj. Flow (vph)	640	122	18	764	103	21
Lane Group Flow (vph)	640	122	18	764	103	21
Turn Type		Free	Prot			custom
Protected Phases	6		5	2	4	
Permitted Phases		Free				2
Total Split (s)	58.0	0.0	20.0	78.0	22.0	78.0
Act Effct Green (s)	77.3	100.0	9.5	82.8	11.2	82.8
Actuated g/C Ratio	0.77	1.00	0.10	0.83	0.11	0.83
v/c Ratio	0.23	0.08	0.11	0.26	0.27	0.02
Control Delay	2.7	0.1	41.4	2.2	40.8	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.7	0.1	41.4	2.2	40.8	0.8
LOS	A	A	D	A	D	A
Approach Delay	2.3			3.1	34.0	
Approach LOS	A			A	C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 56 (56%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.27	
Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 28.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



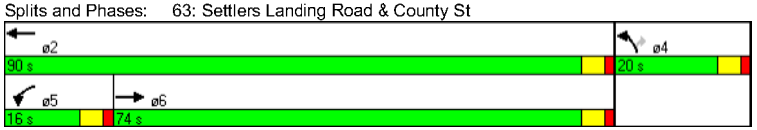
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	576	110	16	665	80	16
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	640	122	18	764	103	21
RTOR Reduction (vph)	0	0	0	0	0	4
Lane Group Flow (vph)	640	122	18	764	103	17
Turn Type		Free	Prot			custom
Protected Phases	6		5	2	4	
Permitted Phases		Free				2
Actuated Green, G (s)	70.7	100.0	3.1	79.8	8.2	79.8
Effective Green, g (s)	73.7	100.0	6.1	82.8	11.2	82.8
Actuated g/C Ratio	0.74	1.00	0.06	0.83	0.11	0.83
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2608	1583	108	2930	384	1311
v/s Ratio Prot	0.18		0.01	c0.22	c0.03	
v/s Ratio Perm		0.08				0.01
v/c Ratio	0.25	0.08	0.17	0.26	0.27	0.01
Uniform Delay, d1	4.2	0.0	44.5	1.9	40.6	1.5
Progression Factor	0.62	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.7	0.2	0.4	0.0
Delay (s)	2.8	0.1	45.3	2.1	41.0	1.5
Level of Service	A	A	D	A	D	A
Approach Delay (s)	2.4			3.1	34.3	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	5.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		54				21
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1135	197	16	1188	162	16
Adj. Flow (vph)	1261	219	18	1366	208	21
Lane Group Flow (vph)	1261	219	18	1366	208	21
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Total Split (s)	74.0	0.0	16.0	90.0	20.0	20.0
Act Effct Green (s)	85.1	110.0	8.6	90.2	13.8	13.8
Actuated g/C Ratio	0.77	1.00	0.08	0.82	0.13	0.13
v/c Ratio	0.46	0.14	0.13	0.47	0.48	0.10
Control Delay	1.8	0.1	47.6	3.7	46.6	17.1
Queue Delay	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay	1.9	0.1	47.6	3.7	46.6	17.1
LOS	A	A	D	A	D	B
Approach Delay	1.7			4.3	43.9	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 102 (93%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 6.0	Intersection LOS: A
Intersection Capacity Utilization 44.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



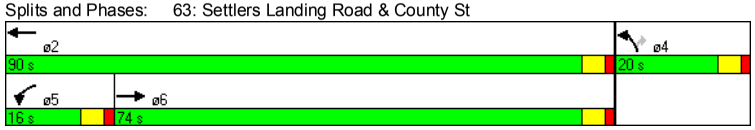
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	1135	197	16	1188	162	16
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	1261	219	18	1366	208	21
RTOR Reduction (vph)	0	0	0	0	0	18
Lane Group Flow (vph)	1261	219	18	1366	208	3
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Actuated Green, G (s)	80.1	110.0	3.1	88.2	11.8	11.8
Effective Green, g (s)	82.1	110.0	5.1	90.2	13.8	13.8
Actuated g/C Ratio	0.75	1.00	0.05	0.82	0.13	0.13
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2641	1583	82	2902	431	199
v/s Ratio Prot	0.36		0.01	c0.39	c0.06	
v/s Ratio Perm		0.14				0.00
v/c Ratio	0.48	0.14	0.22	0.47	0.48	0.01
Uniform Delay, d1	5.5	0.0	50.5	2.9	44.8	42.1
Progression Factor	0.25	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	1.4	0.6	0.9	0.0
Delay (s)	1.8	0.1	51.9	3.5	45.6	42.2
Level of Service	A	A	D	A	D	D
Approach Delay (s)	1.6			4.1	45.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	5.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		54				21
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1135	197	16	1188	162	16
Adj. Flow (vph)	1261	219	18	1366	208	21
Lane Group Flow (vph)	1261	219	18	1366	208	21
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Total Split (s)	74.0	0.0	16.0	90.0	20.0	20.0
Act Effct Green (s)	85.2	110.0	8.6	90.3	13.7	13.7
Actuated g/C Ratio	0.77	1.00	0.08	0.82	0.12	0.12
v/c Ratio	0.46	0.14	0.13	0.47	0.49	0.10
Control Delay	2.6	0.1	47.6	3.7	44.3	14.8
Queue Delay	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay	2.7	0.1	47.6	3.7	44.3	14.8
LOS	A	A	D	A	D	B
Approach Delay	2.3			4.3	41.6	
Approach LOS	A			A	D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 42 (38%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 6.1	Intersection LOS: A
Intersection Capacity Utilization 44.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 63: Settlers Landing Road & County St



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Volume (vph)	1135	197	16	1188	162	16
Peak-hour factor, PHF	0.90	0.90	0.87	0.87	0.78	0.78
Adj. Flow (vph)	1261	219	18	1366	208	21
RTOR Reduction (vph)	0	0	0	0	0	18
Lane Group Flow (vph)	1261	219	18	1366	208	3
Turn Type		Free	Prot			Perm
Protected Phases	6		5	2	4	
Permitted Phases		Free				4
Actuated Green, G (s)	80.2	110.0	3.1	88.3	11.7	11.7
Effective Green, g (s)	82.2	110.0	5.1	90.3	13.7	13.7
Actuated g/C Ratio	0.75	1.00	0.05	0.82	0.12	0.12
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2645	1583	82	2905	428	197
v/s Ratio Prot	0.36		0.01	c0.39	c0.06	
v/s Ratio Perm		0.14				0.00
v/c Ratio	0.48	0.14	0.22	0.47	0.49	0.01
Uniform Delay, d1	5.5	0.0	50.5	2.9	44.9	42.2
Progression Factor	0.38	1.00	1.00	1.00	0.95	0.86
Incremental Delay, d2	0.5	0.1	1.4	0.5	0.9	0.0
Delay (s)	2.6	0.1	51.9	3.4	43.4	36.3
Level of Service	A	A	D	A	D	D
Approach Delay (s)	2.2			4.1	42.8	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	6.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

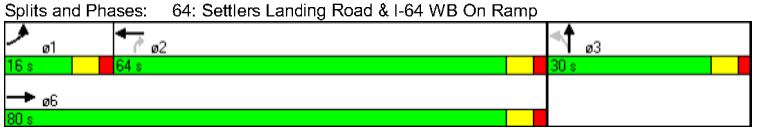
Traffic Analysis

Woodland Road/I-64 WB On- and Off-Ramps

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.916				0.850			
Flt Protected	0.950							0.950				
Satd. Flow (prot)	1770	3539	0	0	3242	0	0	1770	1583	0	0	0
Flt Permitted	0.950							0.950				
Satd. Flow (perm)	1770	3539	0	0	3242	0	0	1770	1583	0	0	0
Satd. Flow (RTOR)					468				162			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	87	685	0	0	602	765	162	0	128	0	0	0
Adj. Flow (vph)	121	951	0	0	717	911	205	0	162	0	0	0
Lane Group Flow (vph)	121	951	0	0	1628	0	0	205	162	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Total Split (s)	16.0	80.0	0.0	0.0	64.0	0.0	30.0	30.0	64.0	0.0	0.0	0.0
Act Effct Green (s)	14.1	83.5			66.4			20.5	66.4			
Actuated g/C Ratio	0.13	0.76			0.60			0.19	0.60			
v/c Ratio	0.53	0.35			0.76			0.62	0.16			
Control Delay	62.6	1.3			14.6			44.0	2.2			
Queue Delay	0.0	0.1			0.0			0.0	0.0			
Total Delay	62.6	1.5			14.7			44.0	2.2			
LOS	E	A			B			D	A			
Approach Delay		8.4			14.7			25.6				
Approach LOS		A			B			C				

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 44 (40%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 65.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



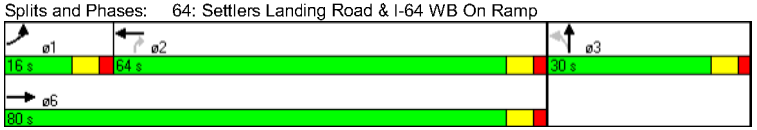
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00			
Frt	1.00	1.00			0.92			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (prot)	1770	3539			3242			1770	1583			
Flt Permitted	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (perm)	1770	3539			3242			1770	1583			
Volume (vph)	87	685	0	0	602	765	162	0	128	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	121	951	0	0	717	911	205	0	162	0	0	0
RTOR Reduction (vph)	0	0	0	0	185	0	0	0	64	0	0	0
Lane Group Flow (vph)	121	951	0	0	1443	0	0	205	98	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Actuated Green, G (s)	11.1	80.5			63.4			17.5	63.4			
Effective Green, g (s)	14.1	83.5			66.4			20.5	66.4			
Actuated g/C Ratio	0.13	0.76			0.60			0.19	0.60			
Clearance Time (s)	6.0	6.0			6.0			6.0	6.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	227	2686			1957			330	956			
v/s Ratio Prot	c0.07	0.27			c0.44							
v/s Ratio Perm								0.12	0.06			
v/c Ratio	0.53	0.35			0.74			0.62	0.10			
Uniform Delay, d1	44.9	4.4			15.6			41.2	9.2			
Progression Factor	1.21	0.20			1.03			1.00	1.00			
Incremental Delay, d2	2.4	0.4			2.3			3.6	0.2			
Delay (s)	56.7	1.2			18.3			44.8	9.4			
Level of Service	E	A			B			D	A			
Approach Delay (s)		7.5			18.3			29.2			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.925				0.850			
Flt Protected	0.950							0.950				
Satd. Flow (prot)	1770	3539	0	0	3274	0	0	1770	1583	0	0	0
Flt Permitted	0.950							0.950				
Satd. Flow (perm)	1770	3539	0	0	3274	0	0	1770	1583	0	0	0
Satd. Flow (RTOR)					372				162			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	87	861	0	0	757	765	162	0	128	0	0	0
Adj. Flow (vph)	121	1196	0	0	901	911	205	0	162	0	0	0
Lane Group Flow (vph)	121	1196	0	0	1812	0	0	205	162	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Total Split (s)	16.0	80.0	0.0	0.0	64.0	0.0	30.0	30.0	64.0	0.0	0.0	0.0
Act Effct Green (s)	14.1	83.5			66.4			20.5	66.4			
Actuated g/C Ratio	0.13	0.76			0.60			0.19	0.60			
v/c Ratio	0.53	0.45			0.85			0.62	0.16			
Control Delay	72.9	1.5			17.3			44.0	2.2			
Queue Delay	0.0	0.1			0.2			0.0	0.0			
Total Delay	72.9	1.6			17.5			44.0	2.2			
LOS	E	A			B			D	A			
Approach Delay		8.2			17.5			25.6				
Approach LOS		A			B			C				

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 52 (47%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 69.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00			
Frt	1.00	1.00			0.92			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (prot)	1770	3539			3272			1770	1583			
Flt Permitted	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (perm)	1770	3539			3272			1770	1583			
Volume (vph)	87	861	0	0	757	765	162	0	128	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	121	1196	0	0	901	911	205	0	162	0	0	0
RTOR Reduction (vph)	0	0	0	0	147	0	0	0	64	0	0	0
Lane Group Flow (vph)	121	1196	0	0	1665	0	0	205	98	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Actuated Green, G (s)	11.1	80.5			63.4			17.5	63.4			
Effective Green, g (s)	14.1	83.5			66.4			20.5	66.4			
Actuated g/C Ratio	0.13	0.76			0.60			0.19	0.60			
Clearance Time (s)	6.0	6.0			6.0			6.0	6.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	227	2686			1975			330	956			
v/s Ratio Prot	c0.07	0.34			c0.51							
v/s Ratio Perm								0.12	0.06			
v/c Ratio	0.53	0.45			0.84			0.62	0.10			
Uniform Delay, d1	44.9	4.8			17.6			41.2	9.2			
Progression Factor	1.45	0.19			0.87			1.00	1.00			
Incremental Delay, d2	2.3	0.5			3.7			3.6	0.2			
Delay (s)	67.1	1.4			19.0			44.8	9.4			
Level of Service	E	A			B			D	A			
Approach Delay (s)		7.5			19.0			29.2			0.0	
Approach LOS		A			B			C			A	

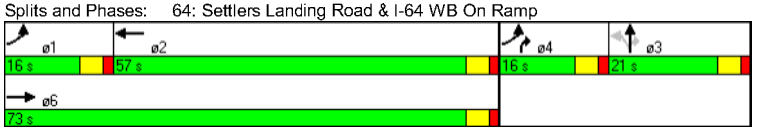
Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.923				0.850			
Flt Protected	0.950							0.950				
Satd. Flow (prot)	1770	3539	0	0	3267	0	0	1770	1583	0	0	0
Flt Permitted	0.950							0.950				
Satd. Flow (perm)	1770	3539	0	0	3267	0	0	1770	1583	0	0	0
Satd. Flow (RTOR)					336				127			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	87	747	0	0	794	830	162	0	128	0	0	0
Adj. Flow (vph)	121	1038	0	0	945	988	205	0	162	0	0	0
Lane Group Flow (vph)	121	1038	0	0	1933	0	0	205	162	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1 4	6			2			3	4			
Permitted Phases							3		3 4			
Total Split (s)	32.0	73.0	0.0	0.0	57.0	0.0	21.0	21.0	16.0	0.0	0.0	0.0
Act Effct Green (s)	20.5	72.0			60.5			17.0	32.0			
Actuated g/C Ratio	0.19	0.65			0.55			0.15	0.29			
v/c Ratio	0.37	0.45			0.99			0.75	0.29			
Control Delay	22.8	8.7			35.9			58.4	9.6			
Queue Delay	0.0	0.2			2.6			0.0	0.0			
Total Delay	22.8	8.9			38.5			58.4	9.6			
LOS	C	A			D			E	A			
Approach Delay		10.3			38.5			36.8				
Approach LOS		B			D			D				

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 25 (23%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 28.9 Intersection LOS: C
Intersection Capacity Utilization 72.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



Lane Group	ø1
Lane Configurations	
Total Lost Time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Headway Factor	
Volume (vph)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	1
Permitted Phases	
Total Split (s)	16.0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00			
Frt	1.00	1.00			0.92			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (prot)	1770	3539			3268			1770	1583			
Flt Permitted	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (perm)	1770	3539			3268			1770	1583			
Volume (vph)	87	747	0	0	794	830	162	0	128	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	121	1038	0	0	945	988	205	0	162	0	0	0
RTOR Reduction (vph)	0	0	0	0	151	0	0	0	94	0	0	0
Lane Group Flow (vph)	121	1038	0	0	1782	0	0	205	68	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1 4	6			2			3	4			
Permitted Phases							3		3 4			
Actuated Green, G (s)	16.5	70.0			58.5			15.0	25.0			
Effective Green, g (s)	20.5	72.0			60.5			17.0	29.0			
Actuated g/C Ratio	0.19	0.65			0.55			0.15	0.26			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	330	2316			1797			274	461			
v/s Ratio Prot	c0.07	c0.29			c0.55				0.02			
v/s Ratio Perm								0.12	0.03			
v/c Ratio	0.37	0.45			0.99			0.75	0.15			
Uniform Delay, d1	39.1	9.3			24.5			44.5	31.0			
Progression Factor	0.89	0.83			0.91			1.00	1.00			
Incremental Delay, d2	0.7	0.6			16.7			10.6	0.1			
Delay (s)	35.3	8.3			38.9			55.1	31.2			
Level of Service	D	A			D			E	C			
Approach Delay (s)		11.1			38.9			44.5			0.0	
Approach LOS		B			D			D			A	

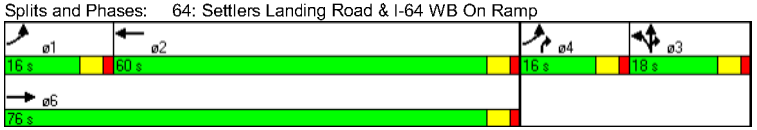
Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt					0.923				0.850			
Flt Protected	0.950						0.950	0.950				
Satd. Flow (prot)	1770	3539	0	0	3267	0	1681	1681	1583	0	0	0
Flt Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	1770	3539	0	0	3267	0	1681	1681	1583	0	0	0
Satd. Flow (RTOR)					355				139			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	87	747	0	0	794	830	162	0	128	0	0	0
Adj. Flow (vph)	121	1038	0	0	945	988	205	0	162	0	0	0
Lane Group Flow (vph)	121	1038	0	0	1933	0	103	102	162	0	0	0
Turn Type	Prot						custom		custom			
Protected Phases	1 4	6			2		3	3	3 4			
Permitted Phases							3		3 4			
Total Split (s)	32.0	76.0	0.0	0.0	60.0	0.0	18.0	18.0	34.0	0.0	0.0	0.0
Act Effct Green (s)	20.1	75.7			64.9		13.0	13.0	28.3			
Actuated g/C Ratio	0.18	0.69			0.59		0.12	0.12	0.26			
v/c Ratio	0.37	0.43			0.93		0.52	0.51	0.32			
Control Delay	30.4	7.1			23.9		51.6	51.4	9.0			
Queue Delay	0.0	0.1			0.6		0.0	0.0	0.0			
Total Delay	30.4	7.2			24.5		51.6	51.4	9.0			
LOS	C	A			C		D	D	A			
Approach Delay		9.7			24.5			32.7				
Approach LOS		A			C			C				

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 30 (27%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 20.4 Intersection LOS: C
Intersection Capacity Utilization 67.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



Lane Group	ø1	ø4
Lane Configurations		
Total Lost Time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Headway Factor		
Volume (vph)		
Adj. Flow (vph)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	4
Permitted Phases		
Total Split (s)	16.0	16.0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.92		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3268		1681	1681	1583			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			3268		1681	1681	1583			
Volume (vph)	87	747	0	0	794	830	162	0	128	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	121	1038	0	0	945	988	205	0	162	0	0	0
RTOR Reduction (vph)	0	0	0	0	145	0	0	0	103	0	0	0
Lane Group Flow (vph)	121	1038	0	0	1788	0	103	102	59	0	0	0
Turn Type	Prot						custom		custom			
Protected Phases	1 4	6			2		3	3	3 4			
Permitted Phases							3		3 4			
Actuated Green, G (s)	16.0	73.8			63.0		11.0	11.0	26.2			
Effective Green, g (s)	20.0	75.8			65.0		13.0	13.0	28.2			
Actuated g/C Ratio	0.18	0.69			0.59		0.12	0.12	0.26			
Clearance Time (s)		5.0			5.0		5.0	5.0				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	322	2439			1931		199	199	406			
v/s Ratio Prot	c0.07	c0.29			c0.55		c0.06	0.06	0.04			
v/s Ratio Perm												
v/c Ratio	0.38	0.43			0.93		0.52	0.51	0.14			
Uniform Delay, d1	39.5	7.5			20.3		45.6	45.5	31.6			
Progression Factor	1.11	0.82			0.92		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.5			7.3		2.3	2.2	0.2			
Delay (s)	44.6	6.7			26.0		47.8	47.7	31.7			
Level of Service	D	A			C		D	D	C			
Approach Delay (s)		10.7			26.0			40.7			0.0	
Approach LOS		B			C			D			A	

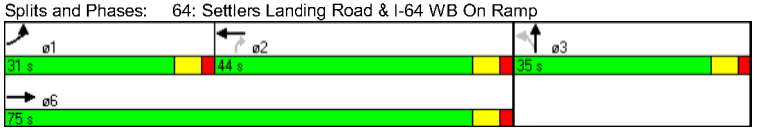
Intersection Summary			
HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.919				0.850			
Flt Protected	0.950							0.950				
Satd. Flow (prot)	1770	3539	0	0	3253	0	0	1770	1583	0	0	0
Flt Permitted	0.950							0.950				
Satd. Flow (perm)	1770	3539	0	0	3253	0	0	1770	1583	0	0	0
Satd. Flow (RTOR)					308				432			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	449	916	0	0	368	431	229	0	341	0	0	0
Adj. Flow (vph)	624	1272	0	0	438	513	290	0	432	0	0	0
Lane Group Flow (vph)	624	1272	0	0	951	0	0	290	432	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Total Split (s)	31.0	75.0	0.0	0.0	44.0	0.0	35.0	35.0	44.0	0.0	0.0	0.0
Act Effct Green (s)	34.8	78.8			41.0			25.2	41.0			
Actuated g/C Ratio	0.32	0.72			0.37			0.23	0.37			
v/c Ratio	1.11	0.50			0.68			0.72	0.50			
Control Delay	111.9	3.9			30.5			42.8	4.5			
Queue Delay	21.8	0.2			0.3			0.0	0.0			
Total Delay	133.7	4.1			30.9			42.8	4.5			
LOS	F	A			C			D	A			
Approach Delay		46.7			30.9			19.9				
Approach LOS		D			C			B				

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 17 (15%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 37.1 Intersection LOS: D
Intersection Capacity Utilization 71.6% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00			
Frt	1.00	1.00			0.92			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (prot)	1770	3539			3253			1770	1583			
Flt Permitted	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (perm)	1770	3539			3253			1770	1583			
Volume (vph)	449	916	0	0	368	431	229	0	341	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	624	1272	0	0	438	513	290	0	432	0	0	0
RTOR Reduction (vph)	0	0	0	0	193	0	0	0	271	0	0	0
Lane Group Flow (vph)	624	1272	0	0	758	0	0	290	161	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Actuated Green, G (s)	31.8	75.8			38.0			22.2	38.0			
Effective Green, g (s)	34.8	78.8			41.0			25.2	41.0			
Actuated g/C Ratio	0.32	0.72			0.37			0.23	0.37			
Clearance Time (s)	6.0	6.0			6.0			6.0	6.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	560	2535			1212			405	590			
v/s Ratio Prot	c0.35	0.36			c0.23							
v/s Ratio Perm								0.16	0.10			
v/c Ratio	1.11	0.50			0.63			0.72	0.27			
Uniform Delay, d1	37.6	6.9			28.2			39.1	24.1			
Progression Factor	1.13	0.42			1.46			1.00	1.00			
Incremental Delay, d2	71.8	0.6			2.4			5.9	1.1			
Delay (s)	114.4	3.6			43.7			45.0	25.2			
Level of Service	F	A			D			D	C			
Approach Delay (s)		40.1			43.7			33.2			0.0	
Approach LOS		D			D			C			A	

Intersection Summary

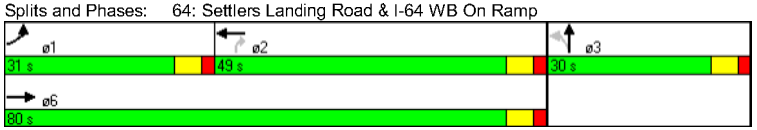
HCM Average Control Delay	39.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.928				0.850			
Flt Protected	0.950							0.950				
Satd. Flow (prot)	1770	3539	0	0	3284	0	0	1770	1583	0	0	0
Flt Permitted	0.950							0.950				
Satd. Flow (perm)	1770	3539	0	0	3284	0	0	1770	1583	0	0	0
Satd. Flow (RTOR)					262				432			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	449	1151	0	0	463	431	229	0	341	0	0	0
Adj. Flow (vph)	624	1599	0	0	551	513	290	0	432	0	0	0
Lane Group Flow (vph)	624	1599	0	0	1064	0	0	290	432	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Total Split (s)	31.0	80.0	0.0	0.0	49.0	0.0	30.0	30.0	49.0	0.0	0.0	0.0
Act Effct Green (s)	30.9	79.9			46.0			24.1	46.0			
Actuated g/C Ratio	0.28	0.73			0.42			0.22	0.42			
v/c Ratio	1.25	0.62			0.70			0.75	0.47			
Control Delay	166.3	3.7			24.3			47.9	3.8			
Queue Delay	16.0	0.2			0.4			0.0	0.0			
Total Delay	182.2	3.9			24.7			47.9	3.8			
LOS	F	A			C			D	A			
Approach Delay		54.0			24.7			21.5				
Approach LOS		D			C			C				

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 109 (99%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay: 40.4	Intersection LOS: D
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00			
Frt	1.00	1.00			0.93			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (prot)	1770	3539			3283			1770	1583			
Flt Permitted	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (perm)	1770	3539			3283			1770	1583			
Volume (vph)	449	1151	0	0	463	431	229	0	341	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	624	1599	0	0	551	513	290	0	432	0	0	0
RTOR Reduction (vph)	0	0	0	0	152	0	0	0	251	0	0	0
Lane Group Flow (vph)	624	1599	0	0	912	0	0	290	181	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Actuated Green, G (s)	27.9	76.9			43.0			21.1	43.0			
Effective Green, g (s)	30.9	79.9			46.0			24.1	46.0			
Actuated g/C Ratio	0.28	0.73			0.42			0.22	0.42			
Clearance Time (s)	6.0	6.0			6.0			6.0	6.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	497	2571			1373			388	662			
v/s Ratio Prot	c0.35	0.45			c0.28							
v/s Ratio Perm								0.16	0.11			
v/c Ratio	1.26	0.62			0.66			0.75	0.27			
Uniform Delay, d1	39.5	7.5			25.8			40.1	21.0			
Progression Factor	1.12	0.34			1.12			1.00	1.00			
Incremental Delay, d2	128.9	1.0			2.4			7.7	1.0			
Delay (s)	173.3	3.5			31.2			47.8	22.0			
Level of Service	F	A			C			D	C			
Approach Delay (s)		51.2			31.2			32.4			0.0	
Approach LOS		D			C			C			A	

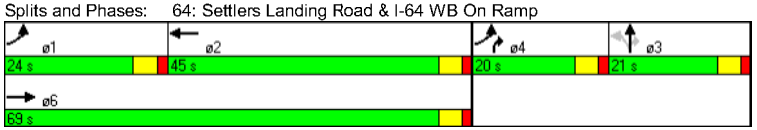
Intersection Summary			
HCM Average Control Delay	42.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.919				0.850			
Flt Protected	0.950							0.950				
Satd. Flow (prot)	1770	3539	0	0	3253	0	0	1770	1583	0	0	0
Flt Permitted	0.950							0.950				
Satd. Flow (perm)	1770	3539	0	0	3253	0	0	1770	1583	0	0	0
Satd. Flow (RTOR)					314				8			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	449	1557	0	0	553	652	229	0	341	0	0	0
Adj. Flow (vph)	624	2162	0	0	658	776	290	0	432	0	0	0
Lane Group Flow (vph)	624	2162	0	0	1434	0	0	290	432	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1 4	6			2			3	4			
Permitted Phases							3		3 4			
Total Split (s)	44.0	69.0	0.0	0.0	45.0	0.0	21.0	21.0	20.0	0.0	0.0	0.0
Act Effct Green (s)	38.0	66.0			42.0			18.0	38.0			
Actuated g/C Ratio	0.35	0.60			0.38			0.16	0.35			
v/c Ratio	1.02	1.02			1.00			1.00	0.78			
Control Delay	55.8	55.6			49.8			99.9	43.2			
Queue Delay	0.0	216.7			6.3			0.0	0.0			
Total Delay	55.8	272.4			56.0			99.9	43.2			
LOS	E	F			E			F	D			
Approach Delay		223.9			56.0			66.0				
Approach LOS		F			E			E				

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 99 (90%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 152.1 Intersection LOS: F
Intersection Capacity Utilization 83.8% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



Lane Group	ø1
Lane Configurations	
Total Lost Time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Headway Factor	
Volume (vph)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	1
Permitted Phases	
Total Split (s)	24.0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00			
Frt	1.00	1.00			0.92			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (prot)	1770	3539			3252			1770	1583			
Flt Permitted	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (perm)	1770	3539			3252			1770	1583			
Volume (vph)	449	1557	0	0	553	652	229	0	341	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	624	2162	0	0	658	776	290	0	432	0	0	0
RTOR Reduction (vph)	0	0	0	0	194	0	0	0	5	0	0	0
Lane Group Flow (vph)	624	2162	0	0	1240	0	0	290	427	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1 4	6			2			3	4			
Permitted Phases							3		3 4			
Actuated Green, G (s)	34.0	64.0			40.0			16.0	31.0			
Effective Green, g (s)	38.0	66.0			42.0			18.0	35.0			
Actuated g/C Ratio	0.35	0.60			0.38			0.16	0.32			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	611	2123			1242			290	547			
v/s Ratio Prot	c0.35	c0.61			0.38				0.12			
v/s Ratio Perm								0.16	0.15			
v/c Ratio	1.02	1.02			1.00			1.00	0.78			
Uniform Delay, d1	36.0	22.0			34.0			46.0	34.0			
Progression Factor	0.62	1.56			1.01			1.00	1.00			
Incremental Delay, d2	37.4	21.9			24.0			52.8	6.9			
Delay (s)	59.6	56.3			58.4			98.8	41.0			
Level of Service	E	E			E			F	D			
Approach Delay (s)		57.1			58.4			64.2			0.0	
Approach LOS		E			E			E			A	

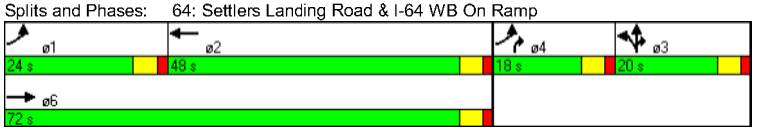
Intersection Summary			
HCM Average Control Delay	58.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt					0.919				0.850			
Flt Protected	0.950						0.950	0.950				
Satd. Flow (prot)	1770	3539	0	0	3253	0	1681	1681	1583	0	0	0
Flt Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	1770	3539	0	0	3253	0	1681	1681	1583	0	0	0
Satd. Flow (RTOR)					328				10			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	449	1557	0	0	553	652	229	0	341	0	0	0
Adj. Flow (vph)	624	2162	0	0	658	776	290	0	432	0	0	0
Lane Group Flow (vph)	624	2162	0	0	1434	0	145	145	432	0	0	0
Turn Type	Prot						custom		custom			
Protected Phases	1 4	6			2		3	3	3 4			
Permitted Phases							3		3 4			
Total Split (s)	42.0	72.0	0.0	0.0	48.0	0.0	20.0	20.0	38.0	0.0	0.0	0.0
Act Effct Green (s)	37.1	70.1			45.0		15.9	15.9	33.9			
Actuated g/C Ratio	0.34	0.64			0.41		0.14	0.14	0.31			
v/c Ratio	1.05	0.96			0.94		0.59	0.59	0.87			
Control Delay	66.4	38.7			37.6		52.5	52.5	51.5			
Queue Delay	0.0	174.8			2.3		0.0	0.0	0.0			
Total Delay	66.4	213.5			39.9		52.5	52.5	51.5			
LOS	E	F			D		D	D	D			
Approach Delay		180.5			39.9			51.9				
Approach LOS		F			D			D				

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 100 (91%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 120.9 Intersection LOS: F
Intersection Capacity Utilization 77.5% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



Lane Group	ø1	ø4
Lane Configurations		
Total Lost Time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Headway Factor		
Volume (vph)		
Adj. Flow (vph)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	4
Permitted Phases		
Total Split (s)	24.0	18.0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

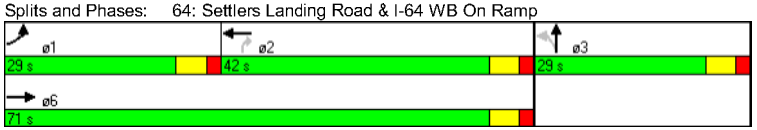
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.92		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3252		1681	1681	1583			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			3252		1681	1681	1583			
Volume (vph)	449	1557	0	0	553	652	229	0	341	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	624	2162	0	0	658	776	290	0	432	0	0	0
RTOR Reduction (vph)	0	0	0	0	194	0	0	0	7	0	0	0
Lane Group Flow (vph)	624	2162	0	0	1240	0	145	145	425	0	0	0
Turn Type	Prot						custom		custom			
Protected Phases	1 4	6			2		3	3	3 4			
Permitted Phases							3		3 4			
Actuated Green, G (s)	33.1	68.1			43.0		13.9	13.9	31.9			
Effective Green, g (s)	37.1	70.1			45.0		15.9	15.9	33.9			
Actuated g/C Ratio	0.34	0.64			0.41		0.14	0.14	0.31			
Clearance Time (s)		5.0			5.0		5.0	5.0				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	597	2255			1330		243	243	488			
v/s Ratio Prot	c0.35	c0.61			0.38		0.09	0.09	c0.27			
v/s Ratio Perm												
v/c Ratio	1.05	0.96			0.93		0.60	0.60	0.87			
Uniform Delay, d1	36.5	18.6			31.0		44.0	44.0	36.0			
Progression Factor	0.65	1.53			1.06		1.00	1.00	1.00			
Incremental Delay, d2	44.8	9.5			12.2		3.9	3.9	15.6			
Delay (s)	68.5	38.0			45.1		48.0	48.0	51.5			
Level of Service	E	D			D		D	D	D			
Approach Delay (s)		44.8			45.1			50.1			0.0	
Approach LOS		D			D			D			A	

Intersection Summary			
HCM Average Control Delay	45.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.933				0.850			
Flt Protected	0.950							0.953				
Satd. Flow (prot)	1770	3539	0	0	3302	0	0	1775	1583	0	0	0
Flt Permitted	0.950							0.953				
Satd. Flow (perm)	1770	3539	0	0	3302	0	0	1775	1583	0	0	0
Satd. Flow (RTOR)					239				166			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	176	404	0	0	336	272	171	2	131	0	0	0
Adj. Flow (vph)	244	561	0	0	400	324	216	3	166	0	0	0
Lane Group Flow (vph)	244	561	0	0	724	0	0	219	166	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Total Split (s)	29.0	71.0	0.0	0.0	42.0	0.0	29.0	29.0	42.0	0.0	0.0	0.0
Act Effct Green (s)	21.1	74.0			49.9			20.0	49.9			
Actuated g/C Ratio	0.21	0.74			0.50			0.20	0.50			
v/c Ratio	0.65	0.21			0.41			0.62	0.19			
Control Delay	40.1	3.6			16.9			39.3	3.7			
Queue Delay	0.0	0.0			0.0			0.0	0.0			
Total Delay	40.1	3.6			16.9			39.3	3.7			
LOS	D	A			B			D	A			
Approach Delay		14.7			16.9			23.9				
Approach LOS		B			B			C				

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 91 (91%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 17.4	Intersection LOS: B
Intersection Capacity Utilization 47.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



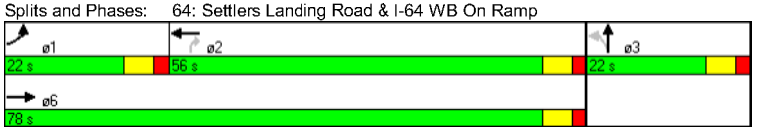
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00			
Frt	1.00	1.00			0.93			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (prot)	1770	3539			3302			1775	1583			
Flt Permitted	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (perm)	1770	3539			3302			1775	1583			
Volume (vph)	176	404	0	0	336	272	171	2	131	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	244	561	0	0	400	324	216	3	166	0	0	0
RTOR Reduction (vph)	0	0	0	0	120	0	0	0	83	0	0	0
Lane Group Flow (vph)	244	561	0	0	604	0	0	219	83	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Actuated Green, G (s)	18.1	71.0			46.9			17.0	46.9			
Effective Green, g (s)	21.1	74.0			49.9			20.0	49.9			
Actuated g/C Ratio	0.21	0.74			0.50			0.20	0.50			
Clearance Time (s)	6.0	6.0			6.0			6.0	6.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	373	2619			1648			355	790			
v/s Ratio Prot	c0.14	0.16			c0.18							
v/s Ratio Perm								0.12	0.05			
v/c Ratio	0.65	0.21			0.37			0.62	0.10			
Uniform Delay, d1	36.1	4.0			15.4			36.5	13.2			
Progression Factor	1.01	0.75			1.40			1.00	1.00			
Incremental Delay, d2	4.1	0.2			0.6			3.2	0.3			
Delay (s)	40.5	3.2			22.2			39.7	13.5			
Level of Service	D	A			C			D	B			
Approach Delay (s)		14.5			22.2			28.4			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.941				0.850			
Flt Protected	0.950							0.953				
Satd. Flow (prot)	1770	3539	0	0	3330	0	0	1775	1583	0	0	0
Flt Permitted	0.950							0.953				
Satd. Flow (perm)	1770	3539	0	0	3330	0	0	1775	1583	0	0	0
Satd. Flow (RTOR)					224				166			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	176	508	0	0	422	272	171	2	131	0	0	0
Adj. Flow (vph)	244	706	0	0	502	324	216	3	166	0	0	0
Lane Group Flow (vph)	244	706	0	0	826	0	0	219	166	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Total Split (s)	22.0	78.0	0.0	0.0	56.0	0.0	22.0	22.0	56.0	0.0	0.0	0.0
Act Effct Green (s)	18.6	76.2			54.7			17.8	54.7			
Actuated g/C Ratio	0.19	0.76			0.55			0.18	0.55			
v/c Ratio	0.74	0.26			0.43			0.70	0.18			
Control Delay	56.5	1.3			9.4			48.1	2.4			
Queue Delay	0.0	0.1			0.0			0.0	0.0			
Total Delay	56.5	1.4			9.4			48.1	2.4			
LOS	E	A			A			D	A			
Approach Delay		15.6			9.4			28.4				
Approach LOS		B			A			C				

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 34 (34%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 49.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00			
Frt	1.00	1.00			0.94			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (prot)	1770	3539			3331			1775	1583			
Flt Permitted	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (perm)	1770	3539			3331			1775	1583			
Volume (vph)	176	508	0	0	422	272	171	2	131	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	244	706	0	0	502	324	216	3	166	0	0	0
RTOR Reduction (vph)	0	0	0	0	102	0	0	0	75	0	0	0
Lane Group Flow (vph)	244	706	0	0	724	0	0	219	91	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1	6			2			3				
Permitted Phases							3		2			
Actuated Green, G (s)	15.6	73.2			51.6			14.8	51.6			
Effective Green, g (s)	18.6	76.2			54.6			17.8	54.6			
Actuated g/C Ratio	0.19	0.76			0.55			0.18	0.55			
Clearance Time (s)	6.0	6.0			6.0			6.0	6.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	329	2697			1819			316	864			
v/s Ratio Prot	c0.14	0.20			c0.22							
v/s Ratio Perm								0.12	0.06			
v/c Ratio	0.74	0.26			0.40			0.69	0.10			
Uniform Delay, d1	38.4	3.5			13.2			38.5	10.9			
Progression Factor	1.14	0.29			0.89			1.00	1.00			
Incremental Delay, d2	8.6	0.2			0.6			6.4	0.2			
Delay (s)	52.4	1.3			12.3			45.0	11.2			
Level of Service	D	A			B			D	B			
Approach Delay (s)		14.4			12.3			30.4			0.0	
Approach LOS		B			B			C			A	

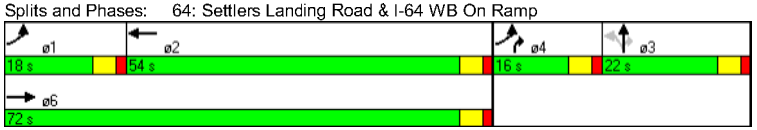
Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.918				0.850			
Flt Protected	0.950							0.953				
Satd. Flow (prot)	1770	3539	0	0	3249	0	0	1775	1583	0	0	0
Flt Permitted	0.950							0.953				
Satd. Flow (perm)	1770	3539	0	0	3249	0	0	1775	1583	0	0	0
Satd. Flow (RTOR)					373				35			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	176	1154	0	0	586	713	171	2	131	0	0	0
Adj. Flow (vph)	244	1603	0	0	698	849	216	3	166	0	0	0
Lane Group Flow (vph)	244	1603	0	0	1547	0	0	219	166	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1 4	6			2			3	4			
Permitted Phases							3		3 4			
Total Split (s)	34.0	72.0	0.0	0.0	54.0	0.0	22.0	22.0	16.0	0.0	0.0	0.0
Act Effct Green (s)	23.3	70.1			56.8			17.9	33.9			
Actuated g/C Ratio	0.21	0.64			0.52			0.16	0.31			
v/c Ratio	0.65	0.71			0.83			0.76	0.32			
Control Delay	35.3	7.5			22.3			57.6	24.5			
Queue Delay	0.0	0.1			0.1			0.0	0.0			
Total Delay	35.3	7.6			22.4			57.6	24.5			
LOS	D	A			C			E	C			
Approach Delay		11.2			22.4			43.3				
Approach LOS		B			C			D				

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 88 (80%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 19.1 Intersection LOS: B
Intersection Capacity Utilization 68.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



Lane Group	ø1
Lane Configurations	
Total Lost Time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Headway Factor	
Volume (vph)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	1
Permitted Phases	
Total Split (s)	18.0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00			
Frt	1.00	1.00			0.92			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (prot)	1770	3539			3248			1775	1583			
Flt Permitted	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (perm)	1770	3539			3248			1775	1583			
Volume (vph)	176	1154	0	0	586	713	171	2	131	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	244	1603	0	0	698	849	216	3	166	0	0	0
RTOR Reduction (vph)	0	0	0	0	180	0	0	0	25	0	0	0
Lane Group Flow (vph)	244	1603	0	0	1367	0	0	219	141	0	0	0
Turn Type	Prot						Perm		custom			
Protected Phases	1 4	6			2			3	4			
Permitted Phases							3		3 4			
Actuated Green, G (s)	19.3	68.1			54.8			15.9	26.9			
Effective Green, g (s)	23.3	70.1			56.8			17.9	30.9			
Actuated g/C Ratio	0.21	0.64			0.52			0.16	0.28			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	375	2255			1677			289	488			
v/s Ratio Prot	c0.14	c0.45			c0.42				0.03			
v/s Ratio Perm								0.12	0.05			
v/c Ratio	0.65	0.71			0.81			0.76	0.29			
Uniform Delay, d1	39.6	13.2			22.2			44.0	30.9			
Progression Factor	1.30	0.42			1.02			1.00	1.00			
Incremental Delay, d2	3.7	1.8			4.1			10.8	0.3			
Delay (s)	55.1	7.3			26.7			54.8	31.3			
Level of Service	E	A			C			D	C			
Approach Delay (s)		13.6			26.7			44.7			0.0	
Approach LOS		B			C			D			A	

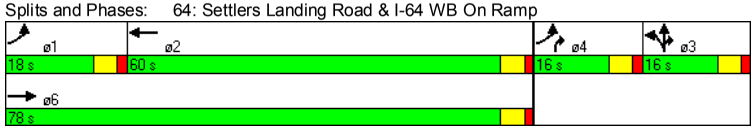
Intersection Summary			
HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt					0.918				0.850			
Flt Protected	0.950						0.950	0.954				
Satd. Flow (prot)	1770	3539	0	0	3249	0	1681	1688	1583	0	0	0
Flt Permitted	0.950						0.950	0.954				
Satd. Flow (perm)	1770	3539	0	0	3249	0	1681	1688	1583	0	0	0
Satd. Flow (RTOR)					415				46			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	176	1154	0	0	586	713	171	2	131	0	0	0
Adj. Flow (vph)	244	1603	0	0	698	849	216	3	166	0	0	0
Lane Group Flow (vph)	244	1603	0	0	1547	0	108	111	166	0	0	0
Turn Type	Prot						custom		custom			
Protected Phases	1 4	6			2		3	3	3 4			
Permitted Phases							3		3 4			
Total Split (s)	34.0	78.0	0.0	0.0	60.0	0.0	16.0	16.0	32.0	0.0	0.0	0.0
Act Effct Green (s)	25.6	76.1			60.2		12.2	12.2	27.9			
Actuated g/C Ratio	0.23	0.69			0.55		0.11	0.11	0.25			
v/c Ratio	0.59	0.65			0.79		0.58	0.59	0.38			
Control Delay	21.1	12.1			18.0		57.0	57.6	26.6			
Queue Delay	0.0	2.3			0.1		0.0	0.0	0.0			
Total Delay	21.1	14.5			18.0		57.0	57.6	26.6			
LOS	C	B			B		E	E	C			
Approach Delay		15.3			18.0			44.1				
Approach LOS		B			B			D				

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 29 (26%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 19.4 Intersection LOS: B
Intersection Capacity Utilization 63.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 64: Settlers Landing Road & I-64 WB On Ramp



Lane Group	ø1	ø4
Lane Configurations		
Total Lost Time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Headway Factor		
Volume (vph)		
Adj. Flow (vph)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	4
Permitted Phases		
Total Split (s)	18.0	16.0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.92		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3248		1681	1688	1583			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			3248		1681	1688	1583			
Volume (vph)	176	1154	0	0	586	713	171	2	131	0	0	0
Peak-hour factor, PHF	0.72	0.72	0.72	0.84	0.84	0.84	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	244	1603	0	0	698	849	216	3	166	0	0	0
RTOR Reduction (vph)	0	0	0	0	188	0	0	0	34	0	0	0
Lane Group Flow (vph)	244	1603	0	0	1359	0	108	111	132	0	0	0
Turn Type	Prot						custom		custom			
Protected Phases	1 4	6			2		3	3	3 4			
Permitted Phases							3		3 4			
Actuated Green, G (s)	21.5	74.1			58.3		10.2	10.2	25.9			
Effective Green, g (s)	25.5	76.1			60.3		12.2	12.2	27.9			
Actuated g/C Ratio	0.23	0.69			0.55		0.11	0.11	0.25			
Clearance Time (s)		5.0			5.0		5.0	5.0				
Vehicle Extension (s)		3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	410	2448			1780		186	187	402			
v/s Ratio Prot	c0.14	c0.45			c0.42		0.06	c0.07	0.08			
v/s Ratio Perm												
v/c Ratio	0.60	0.65			0.76		0.58	0.59	0.33			
Uniform Delay, d1	37.6	9.5			19.3		46.5	46.5	33.4			
Progression Factor	0.66	1.08			1.02		1.00	1.00	1.00			
Incremental Delay, d2	2.1	1.3			2.9		4.6	5.0	0.5			
Delay (s)	27.1	11.6			22.6		51.0	51.5	33.9			
Level of Service	C	B			C		D	D	C			
Approach Delay (s)		13.7			22.6			43.8			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

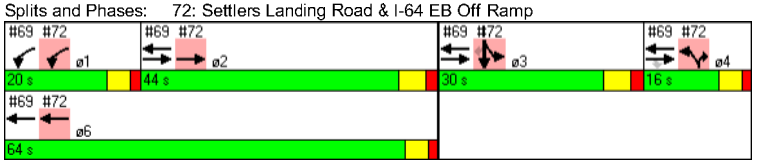
Traffic Analysis

Woodland Road/I-64 EB On- and Off-Ramps/Tyler Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.953							0.850			0.850
Flt Protected				0.950			0.950			0.950	0.984	
Satd. Flow (prot)	0	4846	0	1770	3539	0	1770	0	1583	1610	3336	1583
Flt Permitted				0.950			0.950			0.950	0.984	
Satd. Flow (perm)	0	4846	0	1770	3539	0	1770	0	1583	1610	3336	1583
Satd. Flow (RTOR)		118							69			42
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	872	393	202	273	0	27	0	59	318	275	36
Adj. Flow (vph)	0	928	418	331	448	0	31	0	69	374	324	42
Lane Group Flow (vph)	0	1346	0	331	448	0	31	0	69	225	473	42
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Total Split (s)	0.0	44.0	0.0	20.0	64.0	0.0	16.0	0.0	16.0	30.0	30.0	30.0
Act Effct Green (s)		41.0		17.0	61.0		13.0		13.0	27.0	27.0	27.0
Actuated g/C Ratio		0.37		0.15	0.55		0.12		0.12	0.25	0.25	0.25
v/c Ratio		0.72		1.21	0.23		0.15		0.28	0.57	0.58	0.10
Control Delay		29.3		163.9	15.1		45.6		13.8	43.0	39.8	10.4
Queue Delay		0.0		0.0	0.0		0.0		0.0	0.0	0.0	0.0
Total Delay		29.3		163.9	15.1		45.6		13.8	43.0	39.8	10.4
LOS		C		F	B		D		B	D	D	B
Approach Delay		29.3			78.3						39.1	
Approach LOS		C			E						D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 103 (94%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 44.4	Intersection LOS: D
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 72: Settlers Landing Road & I-64 EB Off Ramp



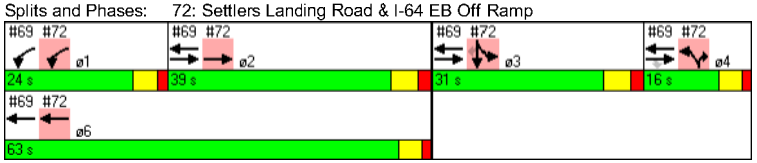
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.91	0.91	1.00
Frt		0.95		1.00	1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	0.98	1.00
Satd. Flow (prot)		4848		1770	3539		1770		1583	1610	3338	1583
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	0.98	1.00
Satd. Flow (perm)		4848		1770	3539		1770		1583	1610	3338	1583
Volume (vph)	0	872	393	202	273	0	27	0	59	318	275	36
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	928	418	331	448	0	31	0	69	374	324	42
RTOR Reduction (vph)	0	74	0	0	0	0	0	0	61	0	0	32
Lane Group Flow (vph)	0	1272	0	331	448	0	31	0	8	225	473	10
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Actuated Green, G (s)		38.0		15.0	59.0		11.0		11.0	24.0	24.0	24.0
Effective Green, g (s)		41.0		17.0	61.0		13.0		13.0	27.0	27.0	27.0
Actuated g/C Ratio		0.37		0.15	0.55		0.12		0.12	0.25	0.25	0.25
Clearance Time (s)		6.0		5.0	5.0		5.0		5.0	6.0	6.0	6.0
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1807		274	1963		209		187	395	819	389
v/s Ratio Prot		c0.26		c0.19	0.13		c0.02		0.01	0.14	c0.14	
v/s Ratio Perm												0.01
v/c Ratio		0.70		1.21	0.23		0.15		0.04	0.57	0.58	0.03
Uniform Delay, d1		29.3		46.5	12.5		43.5		43.0	36.4	36.5	31.5
Progression Factor		1.00		1.02	1.17		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		2.3		122.7	0.3		0.3		0.1	1.9	1.0	0.0
Delay (s)		31.7		169.9	14.9		43.9		43.1	38.3	37.5	31.5
Level of Service		C		F	B		D		D	D	D	C
Approach Delay (s)		31.7			80.8			43.3			37.4	
Approach LOS		C			F			D			D	

Intersection Summary			
HCM Average Control Delay	46.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.960							0.850			0.850
Flt Protected				0.950			0.950			0.950	0.984	
Satd. Flow (prot)	0	4882	0	1770	3539	0	1770	0	1583	1610	3336	1583
Flt Permitted				0.950			0.950			0.950	0.984	
Satd. Flow (perm)	0	4882	0	1770	3539	0	1770	0	1583	1610	3336	1583
Satd. Flow (RTOR)		87							69			42
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	1096	393	202	343	0	27	0	59	318	275	36
Adj. Flow (vph)	0	1166	418	331	562	0	31	0	69	374	324	42
Lane Group Flow (vph)	0	1584	0	331	562	0	31	0	69	225	473	42
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Total Split (s)	0.0	39.0	0.0	24.0	63.0	0.0	16.0	0.0	16.0	31.0	31.0	31.0
Act Effct Green (s)		36.0		21.0	60.0		13.0		13.0	28.0	28.0	28.0
Actuated g/C Ratio		0.33		0.19	0.55		0.12		0.12	0.25	0.25	0.25
v/c Ratio		0.96		0.98	0.29		0.15		0.28	0.55	0.56	0.10
Control Delay		48.6		83.8	18.3		45.6		13.8	41.5	38.6	10.2
Queue Delay		0.0		0.0	0.4		0.0		0.0	0.0	0.0	0.0
Total Delay		48.6		83.8	18.7		45.6		13.8	41.5	38.6	10.2
LOS		D		F	B		D		B	D	D	B
Approach Delay		48.6			42.8						37.9	
Approach LOS		D			D						D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 8 (7%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 43.9	Intersection LOS: D
Intersection Capacity Utilization 69.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 72: Settlers Landing Road & I-64 EB Off Ramp



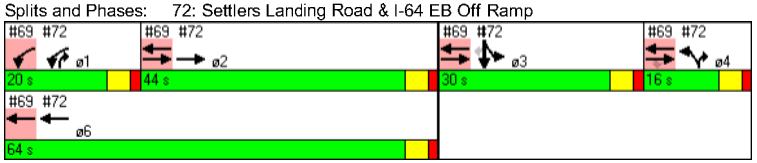
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.91	0.91	1.00
Frt		0.96		1.00	1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	0.98	1.00
Satd. Flow (prot)		4884		1770	3539		1770		1583	1610	3338	1583
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	0.98	1.00
Satd. Flow (perm)		4884		1770	3539		1770		1583	1610	3338	1583
Volume (vph)	0	1096	393	202	343	0	27	0	59	318	275	36
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	1166	418	331	562	0	31	0	69	374	324	42
RTOR Reduction (vph)	0	59	0	0	0	0	0	0	61	0	0	31
Lane Group Flow (vph)	0	1525	0	331	562	0	31	0	8	225	473	11
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Actuated Green, G (s)		33.0		19.0	58.0		11.0		11.0	25.0	25.0	25.0
Effective Green, g (s)		36.0		21.0	60.0		13.0		13.0	28.0	28.0	28.0
Actuated g/C Ratio		0.33		0.19	0.55		0.12		0.12	0.25	0.25	0.25
Clearance Time (s)		6.0		5.0	5.0		5.0		5.0	6.0	6.0	6.0
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1598		338	1930		209		187	410	850	403
v/s Ratio Prot		c0.31		c0.19	0.16		c0.02		0.01	0.14	c0.14	
v/s Ratio Perm												0.01
v/c Ratio		0.95		0.98	0.29		0.15		0.04	0.55	0.56	0.03
Uniform Delay, d1		36.2		44.3	13.5		43.5		43.0	35.5	35.6	30.8
Progression Factor		1.00		0.86	1.31		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		14.0		42.7	0.4		0.3		0.1	1.5	0.8	0.0
Delay (s)		50.2		80.9	18.1		43.9		43.1	37.0	36.4	30.8
Level of Service		D		F	B		D		D	D	D	C
Approach Delay (s)		50.2			41.4			43.3			36.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	44.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.960							0.850			0.850
Flt Protected				0.950			0.950			0.950	0.990	
Satd. Flow (prot)	0	4882	0	1770	3539	0	1770	0	1583	1610	3356	1583
Flt Permitted				0.950			0.950			0.950	0.990	
Satd. Flow (perm)	0	4882	0	1770	3539	0	1770	0	1583	1610	3356	1583
Satd. Flow (RTOR)		94							45			42
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	1091	393	197	385	0	27	0	39	229	275	36
Adj. Flow (vph)	0	1161	418	323	631	0	31	0	45	269	324	42
Lane Group Flow (vph)	0	1579	0	323	631	0	31	0	45	191	402	42
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												3
Total Split (s)	0.0	44.0	0.0	20.0	64.0	0.0	16.0	0.0	36.0	30.0	30.0	30.0
Act Effct Green (s)		41.0		17.0	61.0		13.7		33.7	26.3	26.3	26.3
Actuated g/C Ratio		0.37		0.15	0.55		0.12		0.31	0.24	0.24	0.24
v/c Ratio		0.84		1.18	0.32		0.14		0.09	0.50	0.50	0.10
Control Delay		34.6		155.8	14.0		45.4		8.7	40.7	38.3	10.4
Queue Delay		0.0		0.0	0.4		0.0		0.0	0.0	0.0	0.0
Total Delay		34.6		155.8	14.4		45.4		8.7	40.7	38.3	10.4
LOS		C		F	B		D		A	D	D	B
Approach Delay		34.6			62.3						37.2	
Approach LOS		C			E						D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 16 (15%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 43.0	Intersection LOS: D
Intersection Capacity Utilization 66.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 72: Settlers Landing Road & I-64 EB Off Ramp



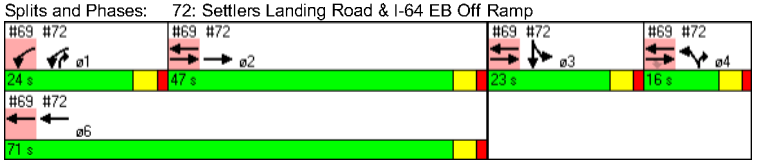
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.91	0.91	1.00
Frt		0.96		1.00	1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	0.99	1.00
Satd. Flow (prot)		4883		1770	3539		1770		1583	1610	3358	1583
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	0.99	1.00
Satd. Flow (perm)		4883		1770	3539		1770		1583	1610	3358	1583
Volume (vph)	0	1091	393	197	385	0	27	0	39	229	275	36
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	1161	418	323	631	0	31	0	45	269	324	42
RTOR Reduction (vph)	0	59	0	0	0	0	0	0	31	0	0	32
Lane Group Flow (vph)	0	1520	0	323	631	0	31	0	14	191	402	10
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												3
Actuated Green, G (s)		39.0		15.0	59.0		11.7		31.7	24.3	24.3	24.3
Effective Green, g (s)		41.0		17.0	61.0		13.7		33.7	26.3	26.3	26.3
Actuated g/C Ratio		0.37		0.15	0.55		0.12		0.31	0.24	0.24	0.24
Clearance Time (s)		5.0		5.0	5.0		5.0			5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0		3.0			3.0	3.0	3.0
Lane Grp Cap (vph)		1820		274	1963		220		485	385	803	378
v/s Ratio Prot		c0.31		c0.18	0.18		c0.02		0.01	0.12	c0.12	
v/s Ratio Perm												0.01
v/c Ratio		0.84		1.18	0.32		0.14		0.03	0.50	0.50	0.03
Uniform Delay, d1		31.4		46.5	13.3		42.9		26.7	36.1	36.2	32.0
Progression Factor		1.00		1.09	1.01		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		4.7		111.5	0.4		0.3		0.0	1.0	0.5	0.0
Delay (s)		36.1		162.2	13.9		43.2		26.7	37.1	36.7	32.1
Level of Service		D		F	B		D		C	D	D	C
Approach Delay (s)		36.1			64.1			33.4			36.5	
Approach LOS		D			E			C			D	

Intersection Summary			
HCM Average Control Delay	44.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	0.95
Frt		0.960							0.850		0.983	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	4882	0	1770	3539	0	1770	0	1583	3433	3479	0
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	4882	0	1770	3539	0	1770	0	1583	3433	3479	0
Satd. Flow (RTOR)		98							45		11	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	1091	393	197	385	0	27	0	39	229	275	36
Adj. Flow (vph)	0	1161	418	323	631	0	31	0	45	269	324	42
Lane Group Flow (vph)	0	1579	0	323	631	0	31	0	45	269	366	0
Turn Type				Prot			Prot		custom	Split		
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												
Total Split (s)	0.0	47.0	0.0	24.0	71.0	0.0	16.0	0.0	40.0	23.0	23.0	0.0
Act Effct Green (s)		44.0		21.0	68.0		13.0		37.0	20.0	20.0	
Actuated g/C Ratio		0.40		0.19	0.62		0.12		0.34	0.18	0.18	
v/c Ratio		0.78		0.96	0.29		0.15		0.08	0.43	0.57	
Control Delay		30.4		82.5	11.1		45.6		7.8	42.4	43.8	
Queue Delay		0.0		0.0	0.4		0.0		0.0	0.0	0.0	
Total Delay		30.4		82.5	11.5		45.6		7.8	42.4	43.8	
LOS		C		F	B		D		A	D	D	
Approach Delay		30.4			35.5						43.2	
Approach LOS		C			D						D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 12 (11%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 34.2	Intersection LOS: C
Intersection Capacity Utilization 66.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 72: Settlers Landing Road & I-64 EB Off Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.97	0.95	
Frt		0.96		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		4883		1770	3539		1770		1583	3433	3478	
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)		4883		1770	3539		1770		1583	3433	3478	
Volume (vph)	0	1091	393	197	385	0	27	0	39	229	275	36
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	1161	418	323	631	0	31	0	45	269	324	42
RTOR Reduction (vph)	0	59	0	0	0	0	0	0	30	0	9	0
Lane Group Flow (vph)	0	1520	0	323	631	0	31	0	15	269	357	0
Turn Type				Prot			Prot		custom	Split		
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												
Actuated Green, G (s)		42.0		19.0	66.0		11.0		35.0	18.0	18.0	
Effective Green, g (s)		44.0		21.0	68.0		13.0		37.0	20.0	20.0	
Actuated g/C Ratio		0.40		0.19	0.62		0.12		0.34	0.18	0.18	
Clearance Time (s)		5.0		5.0	5.0		5.0			5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)		1953		338	2188		209		532	624	632	
v/s Ratio Prot		c0.31		c0.18	0.18		c0.02		0.01	0.08	c0.10	
v/s Ratio Perm												
v/c Ratio		0.78		0.96	0.29		0.15		0.03	0.43	0.56	
Uniform Delay, d1		28.8		44.0	9.8		43.5		24.5	39.9	41.0	
Progression Factor		1.00		0.97	1.09		1.00		1.00	1.00	1.00	
Incremental Delay, d2		3.1		36.9	0.3		0.3		0.0	0.5	1.2	
Delay (s)		31.9		79.4	11.0		43.9		24.5	40.4	42.2	
Level of Service		C		E	B		D		C	D	D	
Approach Delay (s)		31.9			34.2			32.4			41.4	
Approach LOS		C			C			C			D	

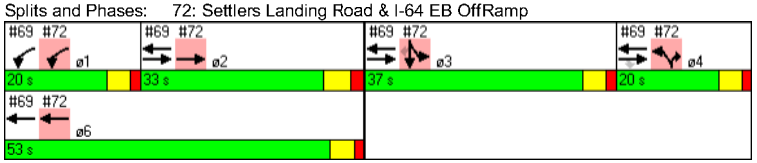
Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.986							0.850			0.850
Flt Protected				0.950			0.950			0.950	0.969	
Satd. Flow (prot)	0	5014	0	1770	3539	0	1770	0	1583	1610	3285	1583
Flt Permitted				0.950			0.950			0.950	0.969	
Satd. Flow (perm)	0	5014	0	1770	3539	0	1770	0	1583	1610	3285	1583
Satd. Flow (RTOR)		15							298			47
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	775	79	71	346	0	199	0	409	379	102	40
Adj. Flow (vph)	0	824	84	116	567	0	231	0	476	446	120	47
Lane Group Flow (vph)	0	908	0	116	567	0	231	0	476	223	343	47
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Total Split (s)	0.0	33.0	0.0	20.0	53.0	0.0	20.0	0.0	20.0	37.0	37.0	37.0
Act Effct Green (s)		31.5		16.3	50.9		17.4		17.4	32.7	32.7	32.7
Actuated g/C Ratio		0.29		0.15	0.46		0.16		0.16	0.30	0.30	0.30
v/c Ratio		0.63		0.44	0.35		0.82		0.95	0.47	0.35	0.09
Control Delay		36.2		37.3	21.1		69.2		47.4	34.5	31.1	8.4
Queue Delay		0.0		0.0	0.5		0.0		0.0	0.0	0.0	0.0
Total Delay		36.2		37.3	21.6		69.2		47.4	34.5	31.1	8.4
LOS		D		D	C		E		D	C	C	A
Approach Delay		36.2			24.2						30.6	
Approach LOS		D			C						C	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 88 (80%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 36.7 Intersection LOS: D
Intersection Capacity Utilization 62.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 72: Settlers Landing Road & I-64 EB OffRamp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.91	0.91	1.00
Frt		0.99		1.00	1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	0.97	1.00
Satd. Flow (prot)		5015		1770	3539		1770		1583	1610	3283	1583
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	0.97	1.00
Satd. Flow (perm)		5015		1770	3539		1770		1583	1610	3283	1583
Volume (vph)	0	775	79	71	346	0	199	0	409	379	102	40
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	824	84	116	567	0	231	0	476	446	120	47
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	251	0	0	33
Lane Group Flow (vph)	0	897	0	116	567	0	231	0	225	223	343	14
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Actuated Green, G (s)		28.6		14.3	48.9		15.4		15.4	30.7	30.7	30.7
Effective Green, g (s)		31.6		16.3	50.9		17.4		17.4	32.7	32.7	32.7
Actuated g/C Ratio		0.29		0.15	0.46		0.16		0.16	0.30	0.30	0.30
Clearance Time (s)		6.0		5.0	5.0		5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1441		262	1638		280		250	479	976	471
v/s Ratio Prot		c0.18		c0.07	0.16		0.13		c0.14	c0.14	0.10	
v/s Ratio Perm												0.01
v/c Ratio		0.62		0.44	0.35		0.82		0.90	0.47	0.35	0.03
Uniform Delay, d1		34.0		42.7	18.9		44.8		45.5	31.5	30.3	27.4
Progression Factor		1.00		0.76	1.06		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		2.0		1.2	0.6		17.6		32.0	0.7	0.2	0.0
Delay (s)		36.1		33.6	20.7		62.5		77.4	32.2	30.5	27.4
Level of Service		D		C	C		E		E	C	C	C
Approach Delay (s)		36.1			22.9			72.5			30.9	
Approach LOS		D			C			E			C	

Intersection Summary

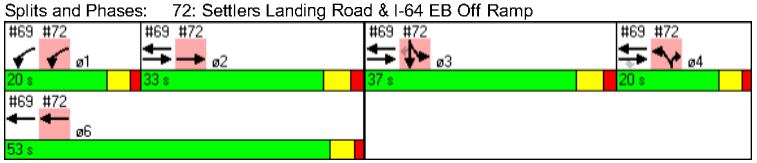
HCM Average Control Delay	40.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.989							0.850			0.850
Flt Protected				0.950			0.950			0.950	0.969	
Satd. Flow (prot)	0	5029	0	1770	3539	0	1770	0	1583	1610	3285	1583
Flt Permitted				0.950			0.950			0.950	0.969	
Satd. Flow (perm)	0	5029	0	1770	3539	0	1770	0	1583	1610	3285	1583
Satd. Flow (RTOR)		12							296			47
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	974	79	71	435	0	199	0	409	379	102	40
Adj. Flow (vph)	0	1036	84	116	713	0	231	0	476	446	120	47
Lane Group Flow (vph)	0	1120	0	116	713	0	231	0	476	223	343	47
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Total Split (s)	0.0	33.0	0.0	20.0	53.0	0.0	20.0	0.0	20.0	37.0	37.0	37.0
Act Effct Green (s)		30.8		16.2	50.0		17.7		17.7	33.3	33.3	33.3
Actuated g/C Ratio		0.28		0.15	0.45		0.16		0.16	0.30	0.30	0.30
v/c Ratio		0.79		0.44	0.44		0.81		0.95	0.46	0.34	0.09
Control Delay		41.3		42.8	21.4		67.5		47.1	34.3	30.8	8.4
Queue Delay		0.0		0.0	0.7		0.0		0.0	0.0	0.0	0.0
Total Delay		41.3		42.8	22.1		67.5		47.1	34.3	30.8	8.4
LOS		D		D	C		E		D	C	C	A
Approach Delay		41.3			25.0						30.3	
Approach LOS		D			C						C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 61 (55%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 37.8	Intersection LOS: D
Intersection Capacity Utilization 66.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 72: Settlers Landing Road & I-64 EB Off Ramp



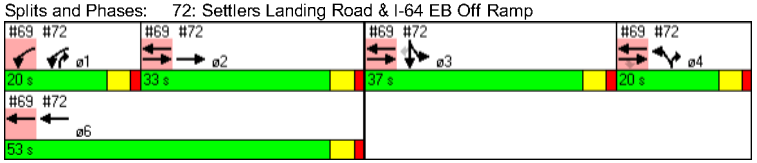
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.91	0.91	1.00
Frt		0.99		1.00	1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	0.97	1.00
Satd. Flow (prot)		5028		1770	3539		1770		1583	1610	3283	1583
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	0.97	1.00
Satd. Flow (perm)		5028		1770	3539		1770		1583	1610	3283	1583
Volume (vph)	0	974	79	71	435	0	199	0	409	379	102	40
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	1036	84	116	713	0	231	0	476	446	120	47
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	248	0	0	33
Lane Group Flow (vph)	0	1111	0	116	713	0	231	0	228	223	343	14
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Actuated Green, G (s)		27.8		14.2	48.0		15.7		15.7	30.3	30.3	30.3
Effective Green, g (s)		30.8		16.2	50.0		17.7		17.7	33.3	33.3	33.3
Actuated g/C Ratio		0.28		0.15	0.45		0.16		0.16	0.30	0.30	0.30
Clearance Time (s)		6.0		5.0	5.0		5.0		5.0	6.0	6.0	6.0
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1408		261	1609		285		255	487	994	479
v/s Ratio Prot		c0.22		0.07	c0.20		0.13		c0.14	c0.14	0.10	
v/s Ratio Perm												0.01
v/c Ratio		0.79		0.44	0.44		0.81		0.89	0.46	0.35	0.03
Uniform Delay, d1		36.6		42.8	20.5		44.5		45.2	31.0	29.9	27.0
Progression Factor		1.00		0.89	0.99		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		4.6		1.2	0.9		15.9		29.9	0.7	0.2	0.0
Delay (s)		41.2		39.2	21.1		60.4		75.1	31.7	30.1	27.0
Level of Service		D		D	C		E		E	C	C	C
Approach Delay (s)		41.2			23.7			70.3			30.4	
Approach LOS		D			C			E			C	

Intersection Summary			
HCM Average Control Delay	41.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.990							0.850			0.850
Flt Protected				0.950			0.950			0.950	0.963	
Satd. Flow (prot)	0	5034	0	1770	3539	0	1770	0	1583	1610	3265	1583
Flt Permitted				0.950			0.950			0.950	0.963	
Satd. Flow (perm)	0	5034	0	1770	3539	0	1770	0	1583	1610	3265	1583
Satd. Flow (RTOR)		10							20			47
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	1065	79	96	500	0	199	0	435	668	102	40
Adj. Flow (vph)	0	1133	84	157	820	0	231	0	506	786	120	47
Lane Group Flow (vph)	0	1217	0	157	820	0	231	0	506	393	513	47
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												3
Total Split (s)	0.0	33.0	0.0	20.0	53.0	0.0	20.0	0.0	40.0	37.0	37.0	37.0
Act Effct Green (s)		30.1		16.9	50.0		17.0		36.9	34.0	34.0	34.0
Actuated g/C Ratio		0.27		0.15	0.45		0.15		0.34	0.31	0.31	0.31
v/c Ratio		0.88		0.58	0.51		0.84		0.93	0.79	0.51	0.09
Control Delay		46.4		57.4	17.3		72.0		59.1	47.7	33.3	8.4
Queue Delay		13.8		0.0	1.0		0.0		0.2	0.0	0.0	0.0
Total Delay		60.1		57.4	18.3		72.0		59.2	47.7	33.3	8.4
LOS		E		E	B		E		E	D	C	A
Approach Delay		60.1			24.6						38.0	
Approach LOS		E			C						D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 5 (5%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 46.4	Intersection LOS: D
Intersection Capacity Utilization 77.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 72: Settlers Landing Road & I-64 EB Off Ramp



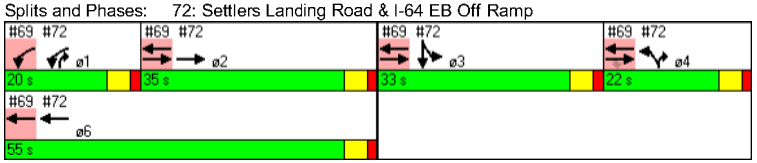
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.91	0.91	1.00
Frt		0.99		1.00	1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	0.96	1.00
Satd. Flow (prot)		5033		1770	3539		1770		1583	1610	3265	1583
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	0.96	1.00
Satd. Flow (perm)		5033		1770	3539		1770		1583	1610	3265	1583
Volume (vph)	0	1065	79	96	500	0	199	0	435	668	102	40
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	1133	84	157	820	0	231	0	506	786	120	47
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	13	0	0	32
Lane Group Flow (vph)	0	1210	0	157	820	0	231	0	493	393	513	15
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												3
Actuated Green, G (s)		28.1		14.9	48.0		15.0		34.9	32.0	32.0	32.0
Effective Green, g (s)		30.1		16.9	50.0		17.0		36.9	34.0	34.0	34.0
Actuated g/C Ratio		0.27		0.15	0.45		0.15		0.34	0.31	0.31	0.31
Clearance Time (s)		5.0		5.0	5.0		5.0			5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0		3.0			3.0	3.0	3.0
Lane Grp Cap (vph)		1377		272	1609		274		531	498	1009	489
v/s Ratio Prot		c0.24		0.09	0.23		0.13		c0.31	c0.24	0.16	
v/s Ratio Perm												0.01
v/c Ratio		0.88		0.58	0.51		0.84		0.93	0.79	0.51	0.03
Uniform Delay, d1		38.2		43.2	21.3		45.2		35.3	34.7	31.1	26.5
Progression Factor		1.00		1.12	0.75		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		8.2		2.9	1.2		20.4		22.5	8.1	0.4	0.0
Delay (s)		46.4		51.2	17.1		65.6		57.7	42.8	31.6	26.5
Level of Service		D		D	B		E		E	D	C	C
Approach Delay (s)		46.4			22.6			60.2			36.0	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM Average Control Delay	40.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	0.95
Frt		0.990							0.850		0.958	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	5034	0	1770	3539	0	1770	0	1583	3433	3391	0
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	5034	0	1770	3539	0	1770	0	1583	3433	3391	0
Satd. Flow (RTOR)		11							13		47	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	1065	79	96	500	0	199	0	435	668	102	40
Adj. Flow (vph)	0	1133	84	157	820	0	231	0	506	786	120	47
Lane Group Flow (vph)	0	1217	0	157	820	0	231	0	506	786	167	0
Turn Type				Prot			Prot		custom	Split		
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												
Total Split (s)	0.0	35.0	0.0	20.0	55.0	0.0	22.0	0.0	42.0	33.0	33.0	0.0
Act Effct Green (s)		32.8		16.2	52.0		19.0		38.2	30.0	30.0	
Actuated g/C Ratio		0.30		0.15	0.47		0.17		0.35	0.27	0.27	
v/c Ratio		0.81		0.60	0.49		0.75		0.91	0.84	0.17	
Control Delay		40.6		58.1	17.2		60.0		52.4	47.2	22.3	
Queue Delay		1.9		0.0	0.9		0.0		0.0	0.0	0.0	
Total Delay		42.5		58.1	18.1		60.0		52.4	47.2	22.3	
LOS		D		E	B		E		D	D	C	
Approach Delay		42.5			24.5						42.8	
Approach LOS		D			C						D	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 5 (5%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 40.4	Intersection LOS: D
Intersection Capacity Utilization 78.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 72: Settlers Landing Road & I-64 EB Off Ramp



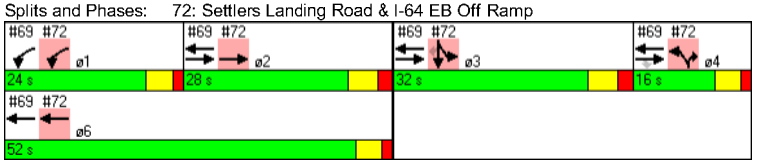
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.97	0.95	
Frt		0.99		1.00	1.00		1.00		0.85	1.00	0.96	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		5033		1770	3539		1770		1583	3433	3390	
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)		5033		1770	3539		1770		1583	3433	3390	
Volume (vph)	0	1065	79	96	500	0	199	0	435	668	102	40
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	1133	84	157	820	0	231	0	506	786	120	47
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	8	0	34	0
Lane Group Flow (vph)	0	1209	0	157	820	0	231	0	498	786	133	0
Turn Type				Prot			Prot		custom	Split		
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												
Actuated Green, G (s)		30.8		14.2	50.0		17.0		36.2	28.0	28.0	
Effective Green, g (s)		32.8		16.2	52.0		19.0		38.2	30.0	30.0	
Actuated g/C Ratio		0.30		0.15	0.47		0.17		0.35	0.27	0.27	
Clearance Time (s)		5.0		5.0	5.0		5.0			5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)		1501		261	1673		306		550	936	925	
v/s Ratio Prot		c0.24		0.09	0.23		0.13		c0.31	c0.23	0.04	
v/s Ratio Perm												
v/c Ratio		0.81		0.60	0.49		0.75		0.90	0.84	0.14	
Uniform Delay, d1		35.7		43.9	19.9		43.3		34.2	37.7	30.3	
Progression Factor		1.00		1.12	0.80		1.00		1.00	1.00	1.00	
Incremental Delay, d2		4.7		3.9	1.0		10.1		18.3	6.7	0.1	
Delay (s)		40.4		53.2	17.0		53.4		52.4	44.4	30.3	
Level of Service		D		D	B		D		D	D	C	
Approach Delay (s)		40.4			22.8			52.7			42.0	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	38.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.982							0.850			0.850
Flt Protected				0.950			0.950			0.950	0.974	
Satd. Flow (prot)	0	4994	0	1770	3539	0	1770	0	1583	1610	3302	1583
Flt Permitted				0.950			0.950			0.950	0.974	
Satd. Flow (perm)	0	4994	0	1770	3539	0	1770	0	1583	1610	3302	1583
Satd. Flow (RTOR)		23							153			93
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	384	52	71	281	0	36	0	132	260	113	79
Adj. Flow (vph)	0	409	55	116	461	0	42	0	153	306	133	93
Lane Group Flow (vph)	0	464	0	116	461	0	42	0	153	153	286	93
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Total Split (s)	0.0	28.0	0.0	24.0	52.0	0.0	16.0	0.0	16.0	32.0	32.0	32.0
Act Effct Green (s)		36.4		16.5	55.9		12.3		12.3	22.8	22.8	22.8
Actuated g/C Ratio		0.36		0.16	0.56		0.12		0.12	0.23	0.23	0.23
v/c Ratio		0.25		0.40	0.23		0.19		0.47	0.42	0.38	0.21
Control Delay		24.3		38.1	9.0		41.0		11.1	33.1	32.1	6.6
Queue Delay		0.0		0.0	0.0		0.0		0.0	0.0	0.0	0.0
Total Delay		24.3		38.1	9.0		41.0		11.1	33.1	32.1	6.6
LOS		C		D	A		D		B	C	C	A
Approach Delay		24.3			14.8						28.0	
Approach LOS		C			B						C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 27 (27%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 36.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 72: Settlers Landing Road & I-64 EB Off Ramp



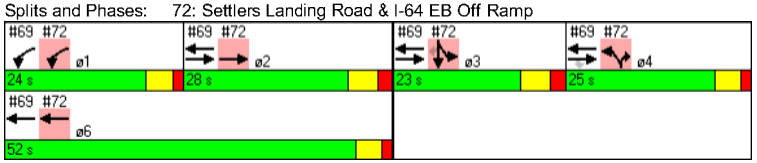
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.91	0.91	1.00
Frt		0.98		1.00	1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	0.97	1.00
Satd. Flow (prot)		4995		1770	3539		1770		1583	1610	3302	1583
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	0.97	1.00
Satd. Flow (perm)		4995		1770	3539		1770		1583	1610	3302	1583
Volume (vph)	0	384	52	71	281	0	36	0	132	260	113	79
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	409	55	116	461	0	42	0	153	306	133	93
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	134	0	0	72
Lane Group Flow (vph)	0	449	0	116	461	0	42	0	19	153	286	21
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Actuated Green, G (s)		33.4		14.5	53.9		10.3		10.3	19.8	19.8	19.8
Effective Green, g (s)		36.4		16.5	55.9		12.3		12.3	22.8	22.8	22.8
Actuated g/C Ratio		0.36		0.16	0.56		0.12		0.12	0.23	0.23	0.23
Clearance Time (s)		6.0		5.0	5.0		5.0		5.0	6.0	6.0	6.0
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1818		292	1978		218		195	367	753	361
v/s Ratio Prot		0.09		c0.07	c0.13		c0.02		0.01	c0.10	0.09	
v/s Ratio Perm												0.01
v/c Ratio		0.25		0.40	0.23		0.19		0.10	0.42	0.38	0.06
Uniform Delay, d1		22.2		37.3	11.2		39.4		38.9	32.9	32.6	30.2
Progression Factor		1.00		0.99	0.68		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		0.3		0.9	0.3		0.4		0.2	0.8	0.3	0.1
Delay (s)		22.5		37.7	7.9		39.8		39.1	33.7	32.9	30.3
Level of Service		C		D	A		D		D	C	C	C
Approach Delay (s)		22.5			13.9			39.3			32.7	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.986							0.850			0.850
Flt Protected				0.950			0.950			0.950	0.974	
Satd. Flow (prot)	0	5014	0	1770	3539	0	1770	0	1583	1610	3302	1583
Flt Permitted				0.950			0.950			0.950	0.974	
Satd. Flow (perm)	0	5014	0	1770	3539	0	1770	0	1583	1610	3302	1583
Satd. Flow (RTOR)		17							153			93
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	483	52	71	353	0	36	0	132	260	113	79
Adj. Flow (vph)	0	514	55	116	579	0	42	0	153	306	133	93
Lane Group Flow (vph)	0	569	0	116	579	0	42	0	153	153	286	93
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Total Split (s)	0.0	28.0	0.0	24.0	52.0	0.0	25.0	0.0	25.0	23.0	23.0	23.0
Act Effct Green (s)		38.1		16.2	57.3		14.9		14.9	18.7	18.7	18.7
Actuated g/C Ratio		0.38		0.16	0.57		0.15		0.15	0.19	0.19	0.19
v/c Ratio		0.30		0.40	0.29		0.16		0.42	0.51	0.46	0.25
Control Delay		23.8		41.3	14.8		34.9		7.6	41.5	38.0	8.9
Queue Delay		0.0		0.0	0.0		0.0		0.0	0.0	0.0	0.0
Total Delay		23.8		41.3	14.8		34.9		7.6	41.5	38.0	8.9
LOS		C		D	B		C		A	D	D	A
Approach Delay		23.8			19.3						33.9	
Approach LOS		C			B						C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 87 (87%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 23.9	Intersection LOS: C
Intersection Capacity Utilization 38.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 72: Settlers Landing Road & I-64 EB Off Ramp



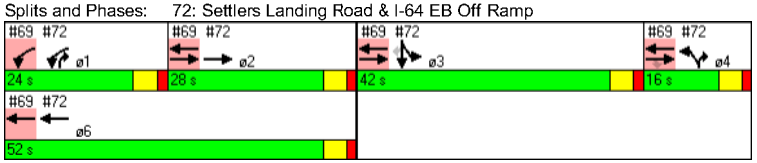
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.91	0.91	1.00
Frt		0.99		1.00	1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	0.97	1.00
Satd. Flow (prot)		5012		1770	3539		1770		1583	1610	3302	1583
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	0.97	1.00
Satd. Flow (perm)		5012		1770	3539		1770		1583	1610	3302	1583
Volume (vph)	0	483	52	71	353	0	36	0	132	260	113	79
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	514	55	116	579	0	42	0	153	306	133	93
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	130	0	0	76
Lane Group Flow (vph)	0	558	0	116	579	0	42	0	23	153	286	17
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		4	3	3	
Permitted Phases									4			3
Actuated Green, G (s)		35.2		14.2	55.4		12.9		12.9	15.7	15.7	15.7
Effective Green, g (s)		38.2		16.2	57.4		14.9		14.9	18.7	18.7	18.7
Actuated g/C Ratio		0.38		0.16	0.57		0.15		0.15	0.19	0.19	0.19
Clearance Time (s)		6.0		5.0	5.0		5.0		5.0	6.0	6.0	6.0
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1915		287	2031		264		236	301	617	296
v/s Ratio Prot		0.11		c0.07	c0.16		c0.02		0.01	c0.10	0.09	
v/s Ratio Perm												0.01
v/c Ratio		0.29		0.40	0.29		0.16		0.10	0.51	0.46	0.06
Uniform Delay, d1		21.5		37.6	10.8		37.1		36.7	36.5	36.2	33.4
Progression Factor		1.00		1.07	1.18		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		0.4		0.9	0.4		0.3		0.2	1.4	0.6	0.1
Delay (s)		21.9		41.0	13.2		37.4		36.9	37.9	36.7	33.5
Level of Service		C		D	B		D		D	D	D	C
Approach Delay (s)		21.9			17.8			37.0			36.5	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.988							0.850			0.850
Flt Protected				0.950			0.950			0.950	0.963	
Satd. Flow (prot)	0	5024	0	1770	3539	0	1770	0	1583	1610	3265	1583
Flt Permitted				0.950			0.950			0.950	0.963	
Satd. Flow (perm)	0	5024	0	1770	3539	0	1770	0	1583	1610	3265	1583
Satd. Flow (RTOR)		12							35			93
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	597	52	126	462	0	36	0	192	732	113	79
Adj. Flow (vph)	0	635	55	207	757	0	42	0	223	861	133	93
Lane Group Flow (vph)	0	690	0	207	757	0	42	0	223	431	563	93
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												3
Total Split (s)	0.0	28.0	0.0	24.0	52.0	0.0	16.0	0.0	40.0	42.0	42.0	42.0
Act Effct Green (s)		27.4		18.6	49.0		13.0		34.6	39.0	39.0	39.0
Actuated g/C Ratio		0.25		0.17	0.45		0.12		0.31	0.35	0.35	0.35
v/c Ratio		0.55		0.69	0.48		0.20		0.43	0.75	0.49	0.15
Control Delay		37.7		52.7	23.9		46.5		26.8	41.2	29.4	5.6
Queue Delay		0.0		0.0	0.9		0.0		0.0	0.0	0.0	0.0
Total Delay		37.7		52.7	24.8		46.5		26.8	41.2	29.4	5.6
LOS		D		D	C		D		C	D	C	A
Approach Delay		37.7			30.8						32.1	
Approach LOS		D			C						C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 35 (32%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 32.8	Intersection LOS: C
Intersection Capacity Utilization 56.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 72: Settlers Landing Road & I-64 EB Off Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	3.0
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.91	0.91	1.00
Frt		0.99		1.00	1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	0.96	1.00
Satd. Flow (prot)		5024		1770	3539		1770		1583	1610	3265	1583
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	0.96	1.00
Satd. Flow (perm)		5024		1770	3539		1770		1583	1610	3265	1583
Volume (vph)	0	597	52	126	462	0	36	0	192	732	113	79
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	635	55	207	757	0	42	0	223	861	133	93
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	24	0	0	60
Lane Group Flow (vph)	0	681	0	207	757	0	42	0	199	431	563	33
Turn Type				Prot			Prot		custom	Split		Perm
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												3
Actuated Green, G (s)		25.4		16.6	47.0		11.0		32.6	37.0	37.0	37.0
Effective Green, g (s)		27.4		18.6	49.0		13.0		34.6	39.0	39.0	39.0
Actuated g/C Ratio		0.25		0.17	0.45		0.12		0.31	0.35	0.35	0.35
Clearance Time (s)		5.0		5.0	5.0		5.0			5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0		3.0			3.0	3.0	3.0
Lane Grp Cap (vph)		1251		299	1576		209		498	571	1158	561
v/s Ratio Prot		c0.14		c0.12	0.21		0.02		c0.13	c0.27	0.17	
v/s Ratio Perm												0.02
v/c Ratio		0.54		0.69	0.48		0.20		0.40	0.75	0.49	0.06
Uniform Delay, d1		35.9		43.0	21.5		43.8		29.6	31.3	27.7	23.4
Progression Factor		1.00		1.04	1.05		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		1.7		6.7	1.0		0.5		0.5	5.6	0.3	0.0
Delay (s)		37.6		51.6	23.7		44.3		30.1	36.9	28.0	23.4
Level of Service		D		D	C		D		C	D	C	C
Approach Delay (s)		37.6			29.7			32.3			31.2	
Approach LOS		D			C			C			C	

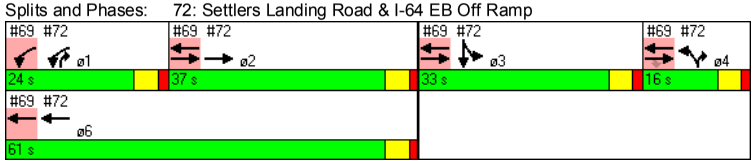
Intersection Summary			
HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	0.95
Frt		0.988							0.850		0.938	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	5024	0	1770	3539	0	1770	0	1583	3433	3320	0
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	5024	0	1770	3539	0	1770	0	1583	3433	3320	0
Satd. Flow (RTOR)		13							44		93	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	597	52	126	462	0	36	0	192	732	113	79
Adj. Flow (vph)	0	635	55	207	757	0	42	0	223	861	133	93
Lane Group Flow (vph)	0	690	0	207	757	0	42	0	223	861	226	0
Turn Type				Prot			Prot		custom	Split		
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												
Total Split (s)	0.0	37.0	0.0	24.0	61.0	0.0	16.0	0.0	40.0	33.0	33.0	0.0
Act Effct Green (s)		36.6		18.4	58.0		13.0		34.4	30.0	30.0	
Actuated g/C Ratio		0.33		0.17	0.53		0.12		0.31	0.27	0.27	
v/c Ratio		0.41		0.70	0.41		0.20		0.42	0.92	0.23	
Control Delay		29.3		56.4	13.6		46.5		25.5	54.8	18.7	
Queue Delay		0.0		0.0	0.6		0.0		0.0	0.0	0.0	
Total Delay		29.3		56.4	14.2		46.5		25.5	54.8	18.7	
LOS		C		E	B		D		C	D	B	
Approach Delay		29.3			23.3						47.3	
Approach LOS		C			C						D	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 29 (26%), Referenced to phase 2:EBWB and 6:WBT, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 33.8 Intersection LOS: C
Intersection Capacity Utilization 55.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 72: Settlers Landing Road & I-64 EB Off Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	
Lane Util. Factor		0.91		1.00	0.95		1.00		1.00	0.97	0.95	
Frt		0.99		1.00	1.00		1.00		0.85	1.00	0.94	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		5024		1770	3539		1770		1583	3433	3321	
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)		5024		1770	3539		1770		1583	3433	3321	
Volume (vph)	0	597	52	126	462	0	36	0	192	732	113	79
Peak-hour factor, PHF	0.94	0.94	0.94	0.61	0.61	0.61	0.86	0.86	0.86	0.85	0.85	0.85
Adj. Flow (vph)	0	635	55	207	757	0	42	0	223	861	133	93
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	30	0	68	0
Lane Group Flow (vph)	0	681	0	207	757	0	42	0	193	861	158	0
Turn Type				Prot			Prot		custom	Split		
Protected Phases		2		1	6		4		1 4	3	3	
Permitted Phases												
Actuated Green, G (s)		34.6		16.4	56.0		11.0		32.4	28.0	28.0	
Effective Green, g (s)		36.6		18.4	58.0		13.0		34.4	30.0	30.0	
Actuated g/C Ratio		0.33		0.17	0.53		0.12		0.31	0.27	0.27	
Clearance Time (s)		5.0		5.0	5.0		5.0			5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)		1672		296	1866		209		495	936	906	
v/s Ratio Prot		0.14		c0.12	c0.21		0.02		c0.12	c0.25	0.05	
v/s Ratio Perm												
v/c Ratio		0.41		0.70	0.41		0.20		0.39	0.92	0.17	
Uniform Delay, d1		28.3		43.2	15.6		43.8		29.6	38.8	30.5	
Progression Factor		1.00		1.13	0.82		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.7		7.0	0.7		0.5		0.5	13.7	0.1	
Delay (s)		29.1		55.7	13.5		44.3		30.1	52.5	30.6	
Level of Service		C		E	B		D		C	D	C	
Approach Delay (s)		29.1			22.5			32.3			48.0	
Approach LOS		C			C			C			D	

Intersection Summary

HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Traffic Analysis

Queuing Reports

Intersection: 6: Hope St & County St, Interval #1

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	29
Average Queue (ft)	13	15
95th Queue (ft)	37	37
Link Distance (ft)	274	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hope St & County St, Interval #2

Movement	WB
Directions Served	LTR
Maximum Queue (ft)	29
Average Queue (ft)	8
95th Queue (ft)	27
Link Distance (ft)	514
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Hope St & County St, Interval #3

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	28	29
Average Queue (ft)	4	16
95th Queue (ft)	21	39
Link Distance (ft)	274	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hope St & County St, Interval #4

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	29
Average Queue (ft)	8	12
95th Queue (ft)	30	34
Link Distance (ft)	274	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hope St & County St, All Intervals

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	29
Average Queue (ft)	6	13
95th Queue (ft)	26	35
Link Distance (ft)	274	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Mellen St & , Interval #1

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	28	23	28
Average Queue (ft)	8	3	4
95th Queue (ft)	27	16	20
Link Distance (ft)	858	288	536
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Mellen St & , Interval #2

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	27	24	52
Average Queue (ft)	7	7	11
95th Queue (ft)	27	24	42
Link Distance (ft)	858	288	536
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Mellen St & , Interval #3

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	28	24	47
Average Queue (ft)	11	3	14
95th Queue (ft)	33	17	43
Link Distance (ft)	858	288	536
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Mellen St & , Interval #4

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	26	24	28
Average Queue (ft)	0	9	11
95th Queue (ft)	0	27	32
Link Distance (ft)	858	288	536
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Mellen St & , All Intervals

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	28	24	52
Average Queue (ft)	7	6	10
95th Queue (ft)	25	22	36
Link Distance (ft)	858	288	536
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Hope St & Mellen St, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	74	29	32	73
Average Queue (ft)	28	8	8	35
95th Queue (ft)	65	29	30	69
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, Interval #2

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	30	29	44	53
Average Queue (ft)	10	8	10	8
95th Queue (ft)	32	29	39	38
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, Interval #3

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	54	51	49	75
Average Queue (ft)	23	14	14	35
95th Queue (ft)	59	35	44	77
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, Interval #4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	51	28	72
Average Queue (ft)	17	16	4	22
95th Queue (ft)	42	47	20	68
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	74	51	49	75
Average Queue (ft)	20	11	9	25
95th Queue (ft)	52	36	35	68
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: County St & , Interval #1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	26
95th Queue (ft)	44
Link Distance (ft)	450
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: County St & , Interval #2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	54
Average Queue (ft)	30
95th Queue (ft)	32
Link Distance (ft)	450
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: County St & , Interval #3

Movement	SB
Directions Served	LR
Maximum Queue (ft)	55
Average Queue (ft)	35
95th Queue (ft)	62
Link Distance (ft)	450
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: County St & , Interval #4

Movement	SB
Directions Served	LR
Maximum Queue (ft)	55
Average Queue (ft)	31
95th Queue (ft)	60
Link Distance (ft)	450
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: County St & , All Intervals

Movement	SB
Directions Served	LR
Maximum Queue (ft)	55
Average Queue (ft)	30
95th Queue (ft)	53
Link Distance (ft)	450
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: Willard Ave & Mercury Blvd, Interval #1

Movement	EB	WB	SB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	32	31	23
Average Queue (ft)	9	9	3
95th Queue (ft)	33	31	17
Link Distance (ft)	548	681	1304
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 19: Willard Ave & Mercury Blvd, Interval #2

Movement	EB	WB	SB	SB
Directions Served	LTR	LTR	LT	TR
Maximum Queue (ft)	32	29	108	68
Average Queue (ft)	11	6	23	13
95th Queue (ft)	33	24	87	52
Link Distance (ft)	548	681	1304	1304
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 19: Willard Ave & Mercury Blvd, Interval #3

Movement	EB	WB	SB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	32	29	50
Average Queue (ft)	13	8	10
95th Queue (ft)	39	29	40
Link Distance (ft)	548	681	1304
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 19: Willard Ave & Mercury Blvd, Interval #4

Movement	EB	WB	SB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	26	29	25
Average Queue (ft)	4	6	4
95th Queue (ft)	19	24	18
Link Distance (ft)	548	681	1304
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 19: Willard Ave & Mercury Blvd, All Intervals

Movement	EB	WB	SB	SB
Directions Served	LTR	LTR	LT	TR
Maximum Queue (ft)	32	31	108	68
Average Queue (ft)	9	7	10	3
95th Queue (ft)	32	27	49	25
Link Distance (ft)	548	681	1304	1304
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Mallory St & Libbey St, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	32	52	39	119
Average Queue (ft)	20	5	18	69
95th Queue (ft)	42	23	45	110
Link Distance (ft)		913	445	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.00			
Queuing Penalty (veh)	0			

Intersection: 23: Mallory St & Libbey St, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	53	71	54	135
Average Queue (ft)	23	10	18	63
95th Queue (ft)	59	51	50	116
Link Distance (ft)		913	445	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.03			
Queuing Penalty (veh)	8			

Intersection: 23: Mallory St & Libbey St, Interval #3

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	51	48	96	156
Average Queue (ft)	21	7	46	127
95th Queue (ft)	53	35	98	179
Link Distance (ft)		913	445	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.02			
Queuing Penalty (veh)	6			

Intersection: 23: Mallory St & Libbey St, Interval #4

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	52	73	54	156
Average Queue (ft)	20	14	24	104
95th Queue (ft)	51	57	62	177
Link Distance (ft)		913	445	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.01			
Queuing Penalty (veh)	4			

Intersection: 23: Mallory St & Libbey St, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	53	73	96	156
Average Queue (ft)	21	9	27	91
95th Queue (ft)	52	43	69	162
Link Distance (ft)		913	445	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.02			
Queuing Penalty (veh)	4			

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	26	65	62	259	243	95	72	178	87
Average Queue (ft)	11	30	25	146	58	58	45	85	43
95th Queue (ft)	32	58	57	267	204	89	81	153	77
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.00	0.00			
Queuing Penalty (veh)					1	1			

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	26	66	62	191	202	58	96	134	44
Average Queue (ft)	10	40	29	132	58	39	59	52	30
95th Queue (ft)	30	66	61	209	156	62	98	82	45
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.02				
Queuing Penalty (veh)					8				

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	69	66	89	289	252	117	95	152	68
Average Queue (ft)	30	50	44	143	107	55	54	102	33
95th Queue (ft)	68	77	94	275	246	103	97	154	59
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)				0.00					
Queuing Penalty (veh)				2					
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.00	0.01			
Queuing Penalty (veh)					1	4			

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	48	44	45	261	184	96	96	92	109
Average Queue (ft)	32	24	18	84	46	45	56	62	43
95th Queue (ft)	47	53	47	211	145	90	90	96	90
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)						0.00			
Queuing Penalty (veh)						1			

Intersection: 24: Mallory St & I-64 WB Off/ On, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	69	66	89	289	252	117	96	178	109
Average Queue (ft)	21	36	29	126	67	49	54	75	37
95th Queue (ft)	51	68	69	250	196	89	93	133	72
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)				0.00					
Queuing Penalty (veh)				1					
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.01	0.00			
Queuing Penalty (veh)					3	1			

Intersection: 25: Mallory St & I-64 EB Off, Interval #1

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LTR
Maximum Queue (ft)	50	94	275	326	52	243
Average Queue (ft)	34	58	182	100	18	173
95th Queue (ft)	55	101	285	323	55	259
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.02			
Queuing Penalty (veh)			3			

Intersection: 25: Mallory St & I-64 EB Off, Interval #2

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LTR
Maximum Queue (ft)	50	52	275	31	52	268
Average Queue (ft)	26	35	165	12	27	199
95th Queue (ft)	54	52	290	36	59	283
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.02			
Queuing Penalty (veh)			3			

Intersection: 25: Mallory St & I-64 EB Off, Interval #3

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LTR
Maximum Queue (ft)	70	115	274	304	53	264
Average Queue (ft)	40	66	144	67	22	167
95th Queue (ft)	68	115	237	230	64	295
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.01			
Queuing Penalty (veh)			2			

Intersection: 25: Mallory St & I-64 EB Off, Interval #4

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LTR
Maximum Queue (ft)	71	118	159	51	53	329
Average Queue (ft)	40	37	104	22	19	205
95th Queue (ft)	76	56	162	39	50	324
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 25: Mallory St & I-64 EB Off, All Intervals

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LTR
Maximum Queue (ft)	71	118	275	326	53	329
Average Queue (ft)	35	49	149	50	22	186
95th Queue (ft)	65	90	258	201	58	295
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.01			
Queuing Penalty (veh)			2			

Intersection: 30: Mellen St & , Interval #1

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	30	30	28
Average Queue (ft)	12	8	8
95th Queue (ft)	35	29	27
Link Distance (ft)	908	310	435
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Mellen St & , Interval #2

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	52	30	29
Average Queue (ft)	8	14	4
95th Queue (ft)	30	36	21
Link Distance (ft)	908	310	435
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Mellen St & , Interval #3

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	50	30	25
Average Queue (ft)	16	8	9
95th Queue (ft)	47	30	27
Link Distance (ft)	908	310	435
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Mellen St & , Interval #4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	25	52	31	26
Average Queue (ft)	4	16	13	4
95th Queue (ft)	18	47	38	19
Link Distance (ft)	908	310	435	411
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 30: Mellen St & , All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	52	52	31	26
Average Queue (ft)	10	12	8	1
95th Queue (ft)	34	37	29	9
Link Distance (ft)	908	310	435	411
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 32: County St & , Interval #1

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	29	30
Average Queue (ft)	17	9
95th Queue (ft)	40	31
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: County St & , Interval #2

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	29	30	28
Average Queue (ft)	16	16	4
95th Queue (ft)	38	38	20
Link Distance (ft)	310	483	450
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 32: County St & , Interval #3

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	27	26
Average Queue (ft)	7	4
95th Queue (ft)	27	19
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: County St & , Interval #4

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	30
Average Queue (ft)	16	9
95th Queue (ft)	40	31
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: County St & , All Intervals

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	30	30	28
Average Queue (ft)	14	9	1
95th Queue (ft)	37	31	10
Link Distance (ft)	310	483	450
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Mallory St & Atlantic Ave, Interval #1

Movement	EB	NB	SB
Directions Served	LT	LTR	LTR
Maximum Queue (ft)	30	72	48
Average Queue (ft)	4	38	35
95th Queue (ft)	21	65	51
Link Distance (ft)	8838	1071	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Mallory St & Atlantic Ave, Interval #2

Movement	EB	NB	SB
Directions Served	LT	LTR	LTR
Maximum Queue (ft)	53	54	46
Average Queue (ft)	8	41	30
95th Queue (ft)	38	61	41
Link Distance (ft)	8838	1071	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Mallory St & Atlantic Ave, Interval #3

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	72	50
Average Queue (ft)	41	33
95th Queue (ft)	68	49
Link Distance (ft)	1071	481
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 40: Mallory St & Atlantic Ave, Interval #4

Movement	EB	NB	SB
Directions Served	LT	LTR	LTR
Maximum Queue (ft)	26	52	28
Average Queue (ft)	4	35	23
95th Queue (ft)	19	52	39
Link Distance (ft)	8838	1071	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Mallory St & Atlantic Ave, All Intervals

Movement	EB	NB	SB
Directions Served	LT	LTR	LTR
Maximum Queue (ft)	53	72	50
Average Queue (ft)	4	39	30
95th Queue (ft)	23	62	47
Link Distance (ft)	8838	1071	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 48: Mallory St & Mellen St, Interval #1

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	70	52	72	70	136	156	72
Average Queue (ft)	14	32	47	42	94	96	42
95th Queue (ft)	54	52	76	80	127	147	76
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, Interval #2

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	50	88	53	69	124	97	71
Average Queue (ft)	15	46	40	33	88	68	38
95th Queue (ft)	45	93	70	72	129	117	80
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, Interval #3

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	72	92	91	113	185	160	73
Average Queue (ft)	36	45	53	53	102	92	39
95th Queue (ft)	74	81	94	120	164	155	85
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, Interval #4

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	28	27	90	49	97	163	51
Average Queue (ft)	16	18	50	24	70	94	27
95th Queue (ft)	38	36	90	51	107	160	50
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, All Intervals

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	72	92	91	113	185	163	73
Average Queue (ft)	20	35	48	38	89	88	36
95th Queue (ft)	57	73	84	87	137	148	75
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 49: Mallory St & Mercury Blvd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	48	50	48	222	108	90	115	116	156	96
Average Queue (ft)	28	33	20	137	69	57	67	62	85	65
95th Queue (ft)	55	60	45	227	107	97	114	118	137	112
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	50	27	25	135	115	92	93	74	178	156
Average Queue (ft)	29	16	18	66	82	56	60	53	84	77
95th Queue (ft)	46	35	31	110	135	110	91	96	161	140
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	71	27	26	220	129	137	136	94	116	115
Average Queue (ft)	43	19	17	99	91	85	92	69	71	66
95th Queue (ft)	77	39	35	177	132	161	130	105	110	112
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	48	27	46	206	113	113	137	134	136	103
Average Queue (ft)	21	22	22	107	81	65	87	75	87	71
95th Queue (ft)	47	37	44	188	122	120	124	121	154	113
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	71	50	48	222	129	137	137	134	178	156
Average Queue (ft)	30	23	19	102	81	66	76	64	82	70
95th Queue (ft)	60	46	40	188	126	127	121	113	143	120
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 52: Mallory St & County St, Interval #1

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	53	25	51	48	74	93	28
Average Queue (ft)	18	7	15	11	40	48	14
95th Queue (ft)	47	25	47	40	79	93	34
Link Distance (ft)	246	246	1115	1115	416		
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 52: Mallory St & County St, Interval #2

Movement	EB	WB	WB	NB	SB	SB
Directions Served	LT	LT	TR	LTR	LT	R
Maximum Queue (ft)	48	50	28	32	96	25
Average Queue (ft)	7	11	8	17	54	4
95th Queue (ft)	34	41	28	43	98	18
Link Distance (ft)	246	1115	1115	416		
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 52: Mallory St & County St, Interval #3

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	74	27	28	50	54	69	32
Average Queue (ft)	26	7	19	10	17	47	11
95th Queue (ft)	69	25	39	40	51	69	32
Link Distance (ft)	246	246	1115	1115	416		
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 52: Mallory St & County St, Interval #4

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	28	68	26	27	32	97	28
Average Queue (ft)	14	17	10	7	11	45	12
95th Queue (ft)	35	56	30	27	34	104	34
Link Distance (ft)	246	246	1115	1115	416		
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 52: Mallory St & County St, All Intervals

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	74	68	51	50	74	97	32
Average Queue (ft)	16	8	14	9	22	49	10
95th Queue (ft)	50	33	40	34	58	93	31
Link Distance (ft)	246	246	1115	1115	416		
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 53: Libbey St & County St, Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 53: Libbey St & County St, Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 53: Libbey St & County St, Interval #3

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 53: Libbey St & County St, Interval #4

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 53: Libbey St & County St, All Intervals

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 63: Settlers Landing Road & County St, Interval #1

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	27	356	54	162	221	46	67	22
Average Queue (ft)	10	109	41	106	136	14	37	12
95th Queue (ft)	29	367	59	192	248	42	65	30
Link Distance (ft)	361	361		1134	1134		289	
Upstream Blk Time (%)		0.02						
Queuing Penalty (veh)		7						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)				0.01				
Queuing Penalty (veh)				0				

Intersection: 63: Settlers Landing Road & County St, Interval #2

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	21	354	52	112	132	48	46	21
Average Queue (ft)	3	155	24	69	74	23	33	15
95th Queue (ft)	15	436	60	109	117	45	52	30
Link Distance (ft)	361	361		1134	1134		289	
Upstream Blk Time (%)		0.01						
Queuing Penalty (veh)		6						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 63: Settlers Landing Road & County St, Interval #3

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	52	354	55	562	632	72	67	22
Average Queue (ft)	15	200	36	207	277	44	41	18
95th Queue (ft)	47	487	66	485	562	68	78	31
Link Distance (ft)	361	361		1134	1134		289	
Upstream Blk Time (%)		0.01						
Queuing Penalty (veh)		5						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)				0.07				
Queuing Penalty (veh)				3				

Intersection: 63: Settlers Landing Road & County St, Interval #4

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	32	400	74	489	547	94	108	21
Average Queue (ft)	9	164	32	212	248	38	46	12
95th Queue (ft)	32	464	83	444	492	90	97	29
Link Distance (ft)	361	361		1134	1134		289	
Upstream Blk Time (%)		0.05						
Queuing Penalty (veh)		24						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)				0.13				
Queuing Penalty (veh)				5				

Intersection: 63: Settlers Landing Road & County St, All Intervals

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	52	400	74	562	632	94	108	22
Average Queue (ft)	9	157	33	148	184	30	39	14
95th Queue (ft)	33	444	71	362	423	69	76	30
Link Distance (ft)	361	361		1134	1134		289	
Upstream Blk Time (%)		0.02						
Queuing Penalty (veh)		10						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)				0.05				
Queuing Penalty (veh)				2				

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #1

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	TR	L	LT
Maximum Queue (ft)	57	76	70	170	250	104	90
Average Queue (ft)	35	32	42	86	145	68	53
95th Queue (ft)	66	66	71	162	224	100	91
Link Distance (ft)		311	311	361	361		769
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	200					200	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #2

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	TR	L	LT
Maximum Queue (ft)	181	52	115	369	348	100	70
Average Queue (ft)	82	23	66	199	163	55	58
95th Queue (ft)	183	52	115	358	327	105	81
Link Distance (ft)		311	311	361	361		769
Upstream Blk Time (%)				0.00	0.00		
Queuing Penalty (veh)				4	1		
Storage Bay Dist (ft)	200					200	
Storage Blk Time (%)	0.00						
Queuing Penalty (veh)	0						

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #3

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	TR	L	LT
Maximum Queue (ft)	148	76	138	389	426	102	95
Average Queue (ft)	74	32	50	279	270	53	54
95th Queue (ft)	128	59	117	463	488	106	90
Link Distance (ft)		311	311	361	361		769
Upstream Blk Time (%)				0.04	0.05		
Queuing Penalty (veh)				43	54		
Storage Bay Dist (ft)	200					200	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #4

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	TR	L	LT
Maximum Queue (ft)	133	72	78	447	402	225	340
Average Queue (ft)	66	31	50	339	336	212	237
95th Queue (ft)	126	68	78	497	451	246	437
Link Distance (ft)		311	311	361	361		769
Upstream Blk Time (%)				0.13	0.10		
Queuing Penalty (veh)				117	95		
Storage Bay Dist (ft)	200					200	
Storage Blk Time (%)						0.68	
Queuing Penalty (veh)						55	

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), All Intervals

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	TR	L	LT
Maximum Queue (ft)	181	76	138	447	426	225	340
Average Queue (ft)	64	30	52	226	229	97	100
95th Queue (ft)	137	62	100	442	429	215	267
Link Distance (ft)		311	311	361	361		769
Upstream Blk Time (%)				0.04	0.04		
Queuing Penalty (veh)				41	37		
Storage Bay Dist (ft)	200					200	
Storage Blk Time (%)	0.00					0.17	
Queuing Penalty (veh)	0					14	

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #1

Movement	EB	EB	WB	WB
Directions Served	T	R	L	T
Maximum Queue (ft)	56	19	225	318
Average Queue (ft)	13	9	200	90
95th Queue (ft)	44	23	243	324
Link Distance (ft)	341	341		311
Upstream Blk Time (%)				0.01
Queuing Penalty (veh)				6
Storage Bay Dist (ft)			200	
Storage Blk Time (%)			0.18	
Queuing Penalty (veh)			61	

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #2

Movement	EB	WB
Directions Served	T	L
Maximum Queue (ft)	17	244
Average Queue (ft)	5	170
95th Queue (ft)	17	271
Link Distance (ft)	341	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)		0.08
Queuing Penalty (veh)		27

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #3

Movement	EB	EB	EB	WB	WB
Directions Served	T	T	R	L	T
Maximum Queue (ft)	12	14	38	225	352
Average Queue (ft)	3	2	5	197	84
95th Queue (ft)	10	10	28	252	306
Link Distance (ft)	341	341	341		311
Upstream Blk Time (%)					0.06
Queuing Penalty (veh)					33
Storage Bay Dist (ft)				200	
Storage Blk Time (%)				0.30	
Queuing Penalty (veh)				112	

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #4

Movement	EB	EB	WB	WB	WB
Directions Served	T	R	L	T	T
Maximum Queue (ft)	17	16	225	360	311
Average Queue (ft)	6	2	215	290	131
95th Queue (ft)	18	11	252	486	381
Link Distance (ft)	341	341		311	311
Upstream Blk Time (%)				0.22	0.01
Queuing Penalty (veh)				104	3
Storage Bay Dist (ft)			200		
Storage Blk Time (%)			0.38		
Queuing Penalty (veh)			128		

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), All Intervals

Movement	EB	EB	EB	WB	WB	WB
Directions Served	T	T	R	L	T	T
Maximum Queue (ft)	12	56	38	244	360	311
Average Queue (ft)	1	7	4	195	116	33
95th Queue (ft)	5	26	19	265	374	189
Link Distance (ft)	341	341	341		311	311
Upstream Blk Time (%)					0.07	0.00
Queuing Penalty (veh)					36	1
Storage Bay Dist (ft)				200		
Storage Blk Time (%)				0.24		
Queuing Penalty (veh)				82		

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	832	963	476	146	64	89	33	11	119	89	125	111
Average Queue (ft)	540	839	475	123	41	43	9	6	105	42	84	87
95th Queue (ft)	1032	1076	476	184	69	85	29	14	125	90	139	114
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)		0.08										
Queuing Penalty (veh)		0										
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)		0.02	0.38									
Queuing Penalty (veh)		12	139									

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	841	958	476	208	66	70	38	31	180	67	151	145
Average Queue (ft)	524	829	474	118	35	38	7	8	123	43	106	88
95th Queue (ft)	1027	1068	479	214	66	67	29	25	192	71	164	168
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)		0.06										
Queuing Penalty (veh)		0										
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)		0.04	0.34	0.06								
Queuing Penalty (veh)		33	122	11								

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	763	958	483	209	90	93	38	11	182	90	167	210
Average Queue (ft)	364	762	460	118	68	73	19	7	106	50	120	113
95th Queue (ft)	809	1179	523	214	108	123	40	15	164	112	170	149
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)		0.06										
Queuing Penalty (veh)		0										
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)		0.06	0.29	0.02								
Queuing Penalty (veh)		47	113	5								

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	683	958	475	188	106	90	55	52	94	65	105	95
Average Queue (ft)	315	572	464	122	52	40	21	19	84	37	86	57
95th Queue (ft)	688	1071	497	182	93	99	51	50	109	66	105	85
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)		0.03										
Queuing Penalty (veh)		0										
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)		0.00	0.20	0.00								
Queuing Penalty (veh)		1	71	0								

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	841	963	483	209	106	93	55	52	182	90	167	210
Average Queue (ft)	436	750	468	120	49	49	14	10	104	43	99	86
95th Queue (ft)	920	1157	505	201	90	100	40	30	158	88	153	144
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)		0.06										
Queuing Penalty (veh)		0										
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)		0.03	0.30	0.02								
Queuing Penalty (veh)		23	111	4								

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #1

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	T
Maximum Queue (ft)	53	52	72	53	76
Average Queue (ft)	36	35	36	25	33
95th Queue (ft)	60	51	80	54	82
Link Distance (ft)	559	559	679	679	406
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #2

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	71	30	53	54	162	32
Average Queue (ft)	35	26	20	19	56	5
95th Queue (ft)	71	35	52	50	146	23
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #3

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	50	53	76	78	77	32
Average Queue (ft)	26	39	15	29	31	9
95th Queue (ft)	58	57	60	81	72	31
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #4

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	30	54	32	52	72	31
Average Queue (ft)	28	31	22	28	35	9
95th Queue (ft)	30	58	45	60	76	31
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9001: Eustis Lane & Stillwell Road, All Intervals

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	71	54	76	78	162	32
Average Queue (ft)	31	33	23	25	39	5
95th Queue (ft)	59	53	63	63	100	25
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #1

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	10	44	53	56	244
Average Queue (ft)	4	22	39	25	62
95th Queue (ft)	11	48	55	54	204
Link Distance (ft)	559	559	648	458	458
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #2

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	11	25	74	32	96
Average Queue (ft)	3	23	38	18	44
95th Queue (ft)	10	26	85	43	110
Link Distance (ft)	559	559	648	458	458
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #3

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	11	25	77	54	138
Average Queue (ft)	5	23	50	34	65
95th Queue (ft)	13	27	89	48	156
Link Distance (ft)	559	559	648	458	458
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #4

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	12	25	97	55	142
Average Queue (ft)	8	20	46	40	55
95th Queue (ft)	15	34	84	59	154
Link Distance (ft)	559	559	648	458	458
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9002: Eustis Lane & Ingalls Road, All Intervals

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	12	44	97	56	244
Average Queue (ft)	5	22	43	29	57
95th Queue (ft)	13	37	81	56	160
Link Distance (ft)	559	559	648	458	458
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9003: Ingalls Road & , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9003: Ingalls Road & , Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9003: Ingalls Road & , Interval #3

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9003: Ingalls Road & , Interval #4

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9003: Ingalls Road & , All Intervals

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9004: Stillwell Road & , Interval #1

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9004: Stillwell Road & , Interval #2

Movement	NB
Directions Served	L
Maximum Queue (ft)	31
Average Queue (ft)	9
95th Queue (ft)	31
Link Distance (ft)	317
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9004: Stillwell Road & , Interval #3

Movement	NB
Directions Served	L
Maximum Queue (ft)	29
Average Queue (ft)	8
95th Queue (ft)	30
Link Distance (ft)	317
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9004: Stillwell Road & , Interval #4

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9004: Stillwell Road & , All Intervals

Movement	NB
Directions Served	L
Maximum Queue (ft)	31
Average Queue (ft)	4
95th Queue (ft)	21
Link Distance (ft)	317
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9005: Stillwell Road & , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , Interval #3

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , Interval #4

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , All Intervals

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9006: Mellen Street & , Interval #1

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	110	163	248
Average Queue (ft)	63	113	132
95th Queue (ft)	120	163	239
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , Interval #2

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	152	221	221
Average Queue (ft)	66	152	125
95th Queue (ft)	135	215	214
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , Interval #3

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	91	246	417
Average Queue (ft)	47	152	276
95th Queue (ft)	84	225	478
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , Interval #4

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	134	158	270
Average Queue (ft)	64	117	179
95th Queue (ft)	121	150	305
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , All Intervals

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	152	246	417
Average Queue (ft)	60	134	178
95th Queue (ft)	118	198	348
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Nework Summary

Network wide Queuing Penalty, Interval #1: 230
Network wide Queuing Penalty, Interval #2: 222
Network wide Queuing Penalty, Interval #3: 432
Network wide Queuing Penalty, Interval #4: 607
Network wide Queuing Penalty, All Intervals: 373

Intersection: 6: Hope St & County St, Interval #1

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	29
Average Queue (ft)	13	8
95th Queue (ft)	37	29
Link Distance (ft)	274	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hope St & County St, Interval #2

Movement	WB
Directions Served	LTR
Maximum Queue (ft)	29
Average Queue (ft)	21
95th Queue (ft)	42
Link Distance (ft)	514
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Hope St & County St, Interval #3

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	29
Average Queue (ft)	20	12
95th Queue (ft)	42	34
Link Distance (ft)	274	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hope St & County St, Interval #4

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	29	29
Average Queue (ft)	4	12
95th Queue (ft)	21	35
Link Distance (ft)	274	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hope St & County St, All Intervals

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	29
Average Queue (ft)	9	13
95th Queue (ft)	32	36
Link Distance (ft)	274	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Mellen St & , Interval #1

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	27	24	28
Average Queue (ft)	11	6	8
95th Queue (ft)	33	23	29
Link Distance (ft)	858	288	536
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Mellen St & , Interval #2

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	22	24
Average Queue (ft)	3	13
95th Queue (ft)	16	31
Link Distance (ft)	858	288
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Mellen St & , Interval #3

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	28	23	53
Average Queue (ft)	11	3	18
95th Queue (ft)	32	17	49
Link Distance (ft)	858	288	536
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Mellen St & , Interval #4

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	28	23
Average Queue (ft)	17	13
95th Queue (ft)	36	31
Link Distance (ft)	858	288
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Mellen St & , All Intervals

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	28	24	53
Average Queue (ft)	11	9	7
95th Queue (ft)	31	27	29
Link Distance (ft)	858	288	536
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Hope St & Mellen St, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	29	32	52
Average Queue (ft)	13	17	4	11
95th Queue (ft)	37	40	21	41
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, Interval #2

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	29	50	51	93
Average Queue (ft)	4	19	11	28
95th Queue (ft)	18	49	42	88
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, Interval #3

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	29	53	54
Average Queue (ft)	21	10	11	29
95th Queue (ft)	43	31	43	59
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, Interval #4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	51	29	27	53
Average Queue (ft)	19	21	4	33
95th Queue (ft)	49	42	19	71
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	51	50	53	93
Average Queue (ft)	14	17	8	25
95th Queue (ft)	40	42	33	69
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: County St & , Interval #1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	55
Average Queue (ft)	29
95th Queue (ft)	32
Link Distance (ft)	450
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: County St & , Interval #2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	30
95th Queue (ft)	33
Link Distance (ft)	450
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: County St & , Interval #3

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	31	31
Average Queue (ft)	4	24
95th Queue (ft)	23	41
Link Distance (ft)	288	450
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: County St & , Interval #4

Movement	SB
Directions Served	LR
Maximum Queue (ft)	56
Average Queue (ft)	34
95th Queue (ft)	63
Link Distance (ft)	450
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: County St & , All Intervals

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	31	56
Average Queue (ft)	1	29
95th Queue (ft)	11	47
Link Distance (ft)	288	450
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Willard Ave & Mercury Blvd, Interval #1

Movement	WB
Directions Served	LTR
Maximum Queue (ft)	29
Average Queue (ft)	4
95th Queue (ft)	21
Link Distance (ft)	681
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: Willard Ave & Mercury Blvd, Interval #2

Movement	EB	SB
Directions Served	LTR	LT
Maximum Queue (ft)	26	22
Average Queue (ft)	4	3
95th Queue (ft)	19	16
Link Distance (ft)	548	1304
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Willard Ave & Mercury Blvd, Interval #3

Movement	EB	SB	SB
Directions Served	LTR	LT	TR
Maximum Queue (ft)	32	28	51
Average Queue (ft)	13	4	15
95th Queue (ft)	37	20	46
Link Distance (ft)	548	1304	1304
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 19: Willard Ave & Mercury Blvd, Interval #4

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	32	31
Average Queue (ft)	8	8
95th Queue (ft)	30	30
Link Distance (ft)	548	681
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Willard Ave & Mercury Blvd, All Intervals

Movement	EB	WB	SB	SB
Directions Served	LTR	LTR	LT	TR
Maximum Queue (ft)	32	31	28	51
Average Queue (ft)	6	3	2	4
95th Queue (ft)	26	18	12	23
Link Distance (ft)	548	681	1304	1304
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Mallory St & Libbey St, Interval #1

Movement	EB	WB	WB	NB	SB
Directions Served	L	LT	TR	LTR	LTR
Maximum Queue (ft)	32	199	189	54	53
Average Queue (ft)	9	46	27	24	32
95th Queue (ft)	32	162	136	60	52
Link Distance (ft)		913	913	445	244
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	50				
Storage Blk Time (%)	0.00				
Queuing Penalty (veh)	0				

Intersection: 23: Mallory St & Libbey St, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	54	30	52	52
Average Queue (ft)	30	4	15	35
95th Queue (ft)	58	22	53	52
Link Distance (ft)		913	445	244
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.05			
Queuing Penalty (veh)	20			

Intersection: 23: Mallory St & Libbey St, Interval #3

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	31	75	76	94
Average Queue (ft)	14	15	43	52
95th Queue (ft)	37	59	70	93
Link Distance (ft)		913	445	244
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.00			
Queuing Penalty (veh)	0			

Intersection: 23: Mallory St & Libbey St, Interval #4

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	31	68	53	45
Average Queue (ft)	13	16	25	30
95th Queue (ft)	39	55	55	41
Link Distance (ft)		913	445	244
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.00			
Queuing Penalty (veh)	0			

Intersection: 23: Mallory St & Libbey St, All Intervals

Movement	EB	WB	WB	NB	SB
Directions Served	L	LT	TR	LTR	LTR
Maximum Queue (ft)	54	199	189	76	94
Average Queue (ft)	17	20	7	27	37
95th Queue (ft)	45	91	65	64	66
Link Distance (ft)		913	913	445	244
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	50				
Storage Blk Time (%)	0.01				
Queuing Penalty (veh)	5				

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	72	21	22	299	270	126	181	275	332
Average Queue (ft)	42	3	3	186	142	102	110	275	330
95th Queue (ft)	80	15	16	332	312	145	174	276	333
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)				0.03					0.38
Queuing Penalty (veh)				17					0
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.03	0.06		0.44	
Queuing Penalty (veh)					13	19		17	

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	55	43	18	259	163	125	141	276	350
Average Queue (ft)	31	9	4	179	125	98	96	274	331
95th Queue (ft)	63	36	14	275	206	148	147	276	348
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)									0.38
Queuing Penalty (veh)									0
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.01	0.04		0.44	
Queuing Penalty (veh)					7	13		17	

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	70	24	21	305	228	126	155	276	332
Average Queue (ft)	20	7	3	227	165	123	105	274	330
95th Queue (ft)	62	21	15	323	244	131	160	276	333
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)				0.02					0.41
Queuing Penalty (veh)				9					0
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.01	0.06		0.46	
Queuing Penalty (veh)					7	24		19	

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	91	24	19	304	237	124	139	275	332
Average Queue (ft)	43	7	8	218	119	70	87	274	329
95th Queue (ft)	86	23	22	314	228	113	143	276	334
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)				0.01					0.40
Queuing Penalty (veh)				6					0
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.02	0.03		0.45	
Queuing Penalty (veh)					8	9		17	

Intersection: 24: Mallory St & I-64 WB Off/ On, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	91	43	22	305	270	126	181	276	350
Average Queue (ft)	34	7	4	202	138	98	99	274	330
95th Queue (ft)	76	25	17	318	257	148	158	276	339
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)				0.02					0.39
Queuing Penalty (veh)				8					0
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.02	0.05		0.45	
Queuing Penalty (veh)					9	16		17	

Intersection: 25: Mallory St & I-64 EB Off, Interval #1

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LTR
Maximum Queue (ft)	111	93	218	31	16	348
Average Queue (ft)	40	33	141	4	2	203
95th Queue (ft)	101	67	261	22	12	341
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 25: Mallory St & I-64 EB Off, Interval #2

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LTR
Maximum Queue (ft)	90	111	275	416	29	448
Average Queue (ft)	47	50	108	64	8	300
95th Queue (ft)	90	99	250	302	29	439
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.02			
Queuing Penalty (veh)			1			

Intersection: 25: Mallory St & I-64 EB Off, Interval #3

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LTR
Maximum Queue (ft)	71	90	276	395	30	329
Average Queue (ft)	40	45	111	65	13	237
95th Queue (ft)	77	91	235	288	37	352
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.03			
Queuing Penalty (veh)			1			

Intersection: 25: Mallory St & I-64 EB Off, Interval #4

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LTR
Maximum Queue (ft)	71	53	275	306	31	356
Average Queue (ft)	22	27	133	44	4	268
95th Queue (ft)	61	59	303	220	22	354
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.02			
Queuing Penalty (veh)			1			

Intersection: 25: Mallory St & I-64 EB Off, All Intervals

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LTR
Maximum Queue (ft)	111	111	276	416	31	448
Average Queue (ft)	37	39	123	44	7	252
95th Queue (ft)	86	82	265	234	27	387
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.02			
Queuing Penalty (veh)			1			

Intersection: 30: Mellen St & , Interval #1

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	27	30	29
Average Queue (ft)	4	8	4
95th Queue (ft)	19	30	21
Link Distance (ft)	908	310	411
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Mellen St & , Interval #2

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	30	30	50
Average Queue (ft)	9	9	12
95th Queue (ft)	31	31	43
Link Distance (ft)	908	310	435
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Mellen St & , Interval #3

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	49
Average Queue (ft)	17	20
95th Queue (ft)	40	50
Link Distance (ft)	908	310
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Mellen St & , Interval #4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	30	30	31	28
Average Queue (ft)	8	20	4	4
95th Queue (ft)	28	41	23	20
Link Distance (ft)	908	310	435	411
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 30: Mellen St & , All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	30	49	50	29
Average Queue (ft)	9	14	4	2
95th Queue (ft)	31	40	24	14
Link Distance (ft)	908	310	435	411
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 32: County St & , Interval #1

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	29	29
Average Queue (ft)	8	11
95th Queue (ft)	30	33
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: County St & , Interval #2

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	29	30
Average Queue (ft)	8	12
95th Queue (ft)	30	36
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: County St & , Interval #3

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	30
Average Queue (ft)	17	23
95th Queue (ft)	40	40
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: County St & , Interval #4

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	30
Average Queue (ft)	13	8
95th Queue (ft)	37	30
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: County St & , All Intervals

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	30
Average Queue (ft)	11	14
95th Queue (ft)	35	37
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 40: Mallory St & Atlantic Ave, Interval #1

Movement	EB	NB	SB
Directions Served	LT	LTR	LTR
Maximum Queue (ft)	24	75	73
Average Queue (ft)	3	45	44
95th Queue (ft)	18	72	70
Link Distance (ft)	8838	1071	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Mallory St & Atlantic Ave, Interval #2

Movement	EB	NB	SB
Directions Served	LT	LTR	LTR
Maximum Queue (ft)	29	52	28
Average Queue (ft)	4	32	28
95th Queue (ft)	21	45	29
Link Distance (ft)	8838	1071	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Mallory St & Atlantic Ave, Interval #3

Movement	EB	EB	NB	SB
Directions Served	LT	TR	LTR	LTR
Maximum Queue (ft)	26	22	54	50
Average Queue (ft)	4	6	39	40
95th Queue (ft)	19	22	58	57
Link Distance (ft)	8838	8838	1071	481
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 40: Mallory St & Atlantic Ave, Interval #4

Movement	EB	NB	SB
Directions Served	LT	LTR	LTR
Maximum Queue (ft)	29	54	50
Average Queue (ft)	4	38	34
95th Queue (ft)	21	57	51
Link Distance (ft)	8838	1071	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Mallory St & Atlantic Ave, All Intervals

Movement	EB	EB	NB	SB
Directions Served	LT	TR	LTR	LTR
Maximum Queue (ft)	29	22	75	73
Average Queue (ft)	4	1	39	36
95th Queue (ft)	20	10	60	57
Link Distance (ft)	8838	8838	1071	481
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 48: Mallory St & Mellen St, Interval #1

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	137	323	163	156	210	228	73
Average Queue (ft)	76	187	128	84	168	198	36
95th Queue (ft)	140	362	156	153	222	274	74
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, Interval #2

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	417	477	262	125	217	229	50
Average Queue (ft)	167	222	111	55	168	190	21
95th Queue (ft)	318	409	243	104	226	267	49
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)			0.01				
Queuing Penalty (veh)			3				
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, Interval #3

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	265	350	178	90	244	228	117
Average Queue (ft)	135	196	99	50	192	206	37
95th Queue (ft)	272	387	158	92	282	269	96
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, Interval #4

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	160	260	138	134	286	265	72
Average Queue (ft)	96	164	96	65	201	195	35
95th Queue (ft)	165	282	148	127	265	271	71
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, All Intervals

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	417	477	262	156	286	265	117
Average Queue (ft)	118	192	109	64	182	197	32
95th Queue (ft)	245	366	189	124	254	271	75
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)			0.00				
Queuing Penalty (veh)			1				
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 49: Mallory St & Mercury Blvd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	91	110	105	70	111	92	266	226	334	349
Average Queue (ft)	52	76	78	25	78	62	146	128	244	233
95th Queue (ft)	86	107	109	58	114	105	234	198	320	308
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	93	134	113	70	111	112	241	198	476	476
Average Queue (ft)	48	92	96	32	64	51	141	126	313	294
95th Queue (ft)	100	137	131	83	111	99	224	211	458	435
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)									0.03	0.02
Queuing Penalty (veh)									0	0
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	113	134	147	72	76	88	177	177	476	476
Average Queue (ft)	48	96	98	46	62	54	132	132	344	305
95th Queue (ft)	100	145	151	85	79	97	175	181	498	442
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)									0.05	0.02
Queuing Penalty (veh)									0	0
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	93	159	151	51	115	114	181	180	476	370
Average Queue (ft)	42	93	92	29	85	63	145	131	283	253
95th Queue (ft)	86	149	147	62	120	112	218	213	445	376
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)									0.01	
Queuing Penalty (veh)									0	
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	113	159	151	72	115	114	266	226	476	476
Average Queue (ft)	48	89	91	33	72	58	141	129	296	272
95th Queue (ft)	94	137	137	75	111	104	215	202	447	402
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)									0.02	0.01
Queuing Penalty (veh)									0	0
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 52: Mallory St & County St, Interval #1

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	109	27	67	48	73	158	75
Average Queue (ft)	48	18	32	23	46	112	38
95th Queue (ft)	94	38	61	51	78	159	65
Link Distance (ft)	246	246	1115	1115	416	379	379
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 52: Mallory St & County St, Interval #2

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	50	68	72	90	72	161	52
Average Queue (ft)	31	25	42	35	24	124	30
95th Queue (ft)	44	59	84	73	64	175	57
Link Distance (ft)	246	246	1115	1115	416	379	379
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 52: Mallory St & County St, Interval #3

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	71	49	89	69	74	183	31
Average Queue (ft)	30	25	37	27	47	95	26
95th Queue (ft)	76	55	89	69	74	164	43
Link Distance (ft)	246	246	1115	1115	416	379	379
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 52: Mallory St & County St, Interval #4

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	118	49	114	69	73	115	56
Average Queue (ft)	37	24	47	24	40	83	31
95th Queue (ft)	95	54	99	61	70	131	48
Link Distance (ft)	246	246	1115	1115	416	379	379
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 52: Mallory St & County St, All Intervals

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	118	68	114	90	74	183	75
Average Queue (ft)	36	23	39	27	39	104	31
95th Queue (ft)	82	53	85	64	75	164	55
Link Distance (ft)	246	246	1115	1115	416	379	379
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 53: Libbey St & County St, Interval #1

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	TR
Maximum Queue (ft)	29	28	49	66	113	51	52
Average Queue (ft)	8	12	7	36	49	23	19
95th Queue (ft)	28	35	25	66	121	50	57
Link Distance (ft)		1084		1021	379	842	842
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	200		200				
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 53: Libbey St & County St, Interval #2

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	TR
Maximum Queue (ft)	52	49	27	28	76	73	49
Average Queue (ft)	23	14	4	17	28	44	14
95th Queue (ft)	50	44	20	34	67	70	44
Link Distance (ft)		1084		1021	379	842	842
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	200		200				
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 53: Libbey St & County St, Interval #3

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	TR
Maximum Queue (ft)	26	27	29	50	74	29	31
Average Queue (ft)	4	7	9	29	29	12	12
95th Queue (ft)	19	25	28	55	77	34	34
Link Distance (ft)		1084		1021	379	842	842
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	200		200				
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 53: Libbey St & County St, Interval #4

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	TR
Maximum Queue (ft)	50	48	26	50	71	51	31
Average Queue (ft)	30	25	4	26	32	32	19
95th Queue (ft)	44	55	19	49	74	68	39
Link Distance (ft)		1084		1021	379	842	842
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	200		200				
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 53: Libbey St & County St, All Intervals

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	TR
Maximum Queue (ft)	52	49	49	66	113	73	52
Average Queue (ft)	16	15	6	27	34	28	16
95th Queue (ft)	43	42	23	54	88	62	45
Link Distance (ft)		1084		1021	379	842	842
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	200		200				
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 63: Settlers Landing Road & County St, Interval #1

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	113	405	74	74	119	88	108	43
Average Queue (ft)	51	388	36	55	76	46	72	21
95th Queue (ft)	106	424	80	85	145	79	100	48
Link Distance (ft)	360	360		1134	1134		289	
Upstream Blk Time (%)		0.24						
Queuing Penalty (veh)		231						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)		0.01						
Queuing Penalty (veh)		4						

Intersection: 63: Settlers Landing Road & County St, Interval #2

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	54	405	32	97	96	89	109	22
Average Queue (ft)	22	348	11	48	67	43	69	16
95th Queue (ft)	54	545	33	103	109	85	109	30
Link Distance (ft)	360	360		1134	1134		289	
Upstream Blk Time (%)		0.20						
Queuing Penalty (veh)		193						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 63: Settlers Landing Road & County St, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	R	L	T	T	L	L	R
Maximum Queue (ft)	54	405	138	32	137	224	111	125	87
Average Queue (ft)	20	399	20	12	97	115	79	81	35
95th Queue (ft)	52	416	99	35	146	200	114	115	71
Link Distance (ft)	360	360			1134	1134		289	
Upstream Blk Time (%)		0.23							
Queuing Penalty (veh)		304							
Storage Bay Dist (ft)			100	150			150		150
Storage Blk Time (%)		0.01	0.00		0.00				
Queuing Penalty (veh)		2	0		0				

Intersection: 63: Settlers Landing Road & County St, Interval #4

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	32	404	31	119	134	65	111	84
Average Queue (ft)	13	389	11	67	85	48	88	27
95th Queue (ft)	39	409	32	113	133	63	114	76
Link Distance (ft)	360	360		1134	1134		289	
Upstream Blk Time (%)		0.12						
Queuing Penalty (veh)		115						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 63: Settlers Landing Road & County St, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	R	L	T	T	L	L	R
Maximum Queue (ft)	113	405	138	74	137	224	111	125	87
Average Queue (ft)	26	381	5	17	67	86	54	78	25
95th Queue (ft)	71	487	47	52	122	156	95	112	61
Link Distance (ft)	360	360			1134	1134		289	
Upstream Blk Time (%)		0.20							
Queuing Penalty (veh)		211							
Storage Bay Dist (ft)			100	150			150		150
Storage Blk Time (%)		0.00	0.00		0.00				
Queuing Penalty (veh)		2	0		0				

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #1

Movement	EB	EB	EB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	TR	L	LT	R
Maximum Queue (ft)	225	378	366	352	410	147	130	137
Average Queue (ft)	216	356	337	225	303	84	84	20
95th Queue (ft)	251	381	363	334	429	162	131	99
Link Distance (ft)		311	311	360	360		696	696
Upstream Blk Time (%)		0.25	0.17	0.00	0.03			
Queuing Penalty (veh)		246	168	1	21			
Storage Bay Dist (ft)	200					200		
Storage Blk Time (%)	0.25	0.13						
Queuing Penalty (veh)	196	60						

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #2

Movement	EB	EB	EB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	TR	L	LT	R
Maximum Queue (ft)	225	365	362	241	321	102	112	149
Average Queue (ft)	192	347	333	171	212	57	61	59
95th Queue (ft)	274	370	353	279	335	96	100	173
Link Distance (ft)		311	311	360	360		696	696
Upstream Blk Time (%)		0.20	0.19					
Queuing Penalty (veh)		205	187					
Storage Bay Dist (ft)	200					200		
Storage Blk Time (%)	0.23	0.16						
Queuing Penalty (veh)	180	70						

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #3

Movement	EB	EB	EB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	TR	L	LT	R
Maximum Queue (ft)	225	365	338	406	448	122	155	287
Average Queue (ft)	224	359	271	331	362	76	87	134
95th Queue (ft)	226	375	460	438	483	127	142	329
Link Distance (ft)		311	311	360	360		696	696
Upstream Blk Time (%)		0.51	0.10	0.06	0.09			
Queuing Penalty (veh)		574	108	45	72			
Storage Bay Dist (ft)	200					200		
Storage Blk Time (%)	0.66	0.06						
Queuing Penalty (veh)	715	38						

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #4

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	TR	L	LT
Maximum Queue (ft)	225	365	365	390	381	60	90
Average Queue (ft)	223	346	331	271	291	52	50
95th Queue (ft)	232	377	357	413	382	66	88
Link Distance (ft)		311	311	360	360		696
Upstream Blk Time (%)		0.55	0.13	0.03	0.02		
Queuing Penalty (veh)		552	129	19	16		
Storage Bay Dist (ft)	200					200	
Storage Blk Time (%)	0.72	0.04					
Queuing Penalty (veh)	558	17					

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), All Intervals

Movement	EB	EB	EB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	TR	L	LT	R
Maximum Queue (ft)	225	378	366	406	448	147	155	287
Average Queue (ft)	214	352	318	249	292	67	71	53
95th Queue (ft)	264	378	425	402	438	123	123	200
Link Distance (ft)		311	311	360	360		696	696
Upstream Blk Time (%)		0.38	0.14	0.02	0.04			
Queuing Penalty (veh)		394	148	16	27			
Storage Bay Dist (ft)	200					200		
Storage Blk Time (%)	0.47	0.10						
Queuing Penalty (veh)	412	46						

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #1

Movement	EB	EB	EB	WB
Directions Served	T	T	R	L
Maximum Queue (ft)	389	346	17	138
Average Queue (ft)	229	197	5	88
95th Queue (ft)	380	330	17	162
Link Distance (ft)	341	341	341	
Upstream Blk Time (%)	0.03	0.00		
Queuing Penalty (veh)	21	2		
Storage Bay Dist (ft)				200
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #2

Movement	EB	EB	EB	WB
Directions Served	T	T	R	L
Maximum Queue (ft)	378	354	34	222
Average Queue (ft)	159	164	5	113
95th Queue (ft)	315	307	25	203
Link Distance (ft)	341	341	341	
Upstream Blk Time (%)	0.01	0.01		
Queuing Penalty (veh)	10	6		
Storage Bay Dist (ft)				200
Storage Blk Time (%)				0.06
Queuing Penalty (veh)				17

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #3

Movement	EB	EB	EB	WB	WB	WB
Directions Served	T	T	R	L	T	T
Maximum Queue (ft)	383	389	39	225	291	301
Average Queue (ft)	346	359	6	127	40	43
95th Queue (ft)	409	445	28	224	202	217
Link Distance (ft)	341	341	341		311	311
Upstream Blk Time (%)	0.14	0.11				0.00
Queuing Penalty (veh)	114	92				0
Storage Bay Dist (ft)				200		
Storage Blk Time (%)				0.13		
Queuing Penalty (veh)				43		

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #4

Movement	EB	EB	EB	WB	WB	WB
Directions Served	T	T	R	L	T	T
Maximum Queue (ft)	388	458	410	225	336	311
Average Queue (ft)	375	382	59	188	93	89
95th Queue (ft)	393	469	296	253	336	320
Link Distance (ft)	341	341	341		311	311
Upstream Blk Time (%)	0.29	0.18			0.03	0.01
Queuing Penalty (veh)	210	127			10	2
Storage Bay Dist (ft)				200		
Storage Blk Time (%)				0.26		
Queuing Penalty (veh)				79		

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), All Intervals

Movement	EB	EB	EB	WB	WB	WB
Directions Served	T	T	R	L	T	T
Maximum Queue (ft)	389	458	410	225	336	311
Average Queue (ft)	277	275	19	129	33	33
95th Queue (ft)	461	471	144	231	192	190
Link Distance (ft)	341	341	341		311	311
Upstream Blk Time (%)	0.12	0.07			0.01	0.00
Queuing Penalty (veh)	89	56			3	1
Storage Bay Dist (ft)				200		
Storage Blk Time (%)				0.11		
Queuing Penalty (veh)				35		

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	662	661	467	103	118	132	164	262	251	261	340	101
Average Queue (ft)	521	490	307	74	52	85	115	99	244	258	339	42
95th Queue (ft)	662	643	546	108	112	124	164	212	255	261	340	92
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)											0.49	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)		0.15	0.04						0.60	0.48	0.07	
Queuing Penalty (veh)		65	15						31	25	48	

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	958	958	474	104	86	94	317	260	250	261	340	60
Average Queue (ft)	905	909	409	70	45	69	143	163	246	258	338	29
95th Queue (ft)	1016	997	485	131	98	98	297	284	254	262	341	55
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)	0.21	0.11									0.51	
Queuing Penalty (veh)	0	0									0	
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)		0.60	0.00						0.40	0.41		
Queuing Penalty (veh)		262	0						20	21		

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	977	958	476	125	107	94	423	568	251	280	358	100
Average Queue (ft)	959	958	355	64	69	77	149	314	238	264	339	51
95th Queue (ft)	972	959	641	120	115	114	348	521	271	280	355	100
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)	0.67	0.70									0.56	
Queuing Penalty (veh)	0	0									0	
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)		0.76	0.17					0.03	0.25	0.48		
Queuing Penalty (veh)		350	66					8	15	29		

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	958	958	476	145	66	74	425	570	251	260	340	75
Average Queue (ft)	957	955	474	77	31	56	217	303	247	257	338	47
95th Queue (ft)	962	962	479	151	65	81	380	531	253	263	341	68
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)	0.60	0.60									0.57	
Queuing Penalty (veh)	0	0									0	
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)		0.70	0.08					0.04	0.62	0.38		
Queuing Penalty (veh)		305	27					8	32	19		

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	977	958	476	145	118	132	425	570	251	280	358	101
Average Queue (ft)	836	828	386	71	49	72	156	220	244	259	338	42
95th Queue (ft)	1150	1163	602	130	103	109	320	451	263	269	347	83
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)	0.37	0.35									0.53	
Queuing Penalty (veh)	0	0									0	
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)		0.55	0.07					0.02	0.47	0.44	0.02	
Queuing Penalty (veh)		246	27					4	24	23	12	

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #1

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	220	181	32	205	198	53
Average Queue (ft)	132	98	18	113	79	26
95th Queue (ft)	212	180	44	209	196	58
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #2

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	220	291	32	222	182	55
Average Queue (ft)	127	190	5	139	95	29
95th Queue (ft)	237	283	23	207	205	54
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #3

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	159	294	31	161	203	54
Average Queue (ft)	138	196	8	133	121	31
95th Queue (ft)	170	302	29	181	180	66
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #4

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	179	252	53	118	224	32
Average Queue (ft)	96	184	12	90	117	21
95th Queue (ft)	174	275	45	134	224	43
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9001: Eustis Lane & Stillwell Road, All Intervals

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	220	294	53	222	224	55
Average Queue (ft)	123	167	11	119	103	27
95th Queue (ft)	207	281	37	193	208	56
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #1

Movement	WB	NB	SB	SB
Directions Served	R	TR	L	T
Maximum Queue (ft)	45	663	412	91
Average Queue (ft)	12	431	218	13
95th Queue (ft)	39	758	405	65
Link Distance (ft)	559	648	458	458
Upstream Blk Time (%)		0.04		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #2

Movement	WB	NB	SB
Directions Served	R	TR	L
Maximum Queue (ft)	25	682	397
Average Queue (ft)	7	665	216
95th Queue (ft)	24	676	382
Link Distance (ft)	559	648	458
Upstream Blk Time (%)		0.42	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #3

Movement	WB	NB	SB	SB
Directions Served	R	TR	L	T
Maximum Queue (ft)	24	682	293	76
Average Queue (ft)	9	668	205	11
95th Queue (ft)	26	682	299	55
Link Distance (ft)	559	648	458	458
Upstream Blk Time (%)		0.49		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #4

Movement	WB	NB	SB	SB
Directions Served	R	TR	L	T
Maximum Queue (ft)	47	663	246	93
Average Queue (ft)	19	663	179	28
95th Queue (ft)	45	663	256	89
Link Distance (ft)	559	648	458	458
Upstream Blk Time (%)		0.50		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9002: Eustis Lane & Ingalls Road, All Intervals

Movement	WB	NB	SB	SB
Directions Served	R	TR	L	T
Maximum Queue (ft)	47	682	412	93
Average Queue (ft)	12	607	204	13
95th Queue (ft)	35	841	346	62
Link Distance (ft)	559	648	458	458
Upstream Blk Time (%)		0.36		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9003: Ingalls Road & , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9003: Ingalls Road & , Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9003: Ingalls Road & , Interval #3

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9003: Ingalls Road & , Interval #4

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9003: Ingalls Road & , All Intervals

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9004: Stillwell Road & , Interval #1

Movement	NB	SB
Directions Served	L	R
Maximum Queue (ft)	152	22
Average Queue (ft)	65	3
95th Queue (ft)	128	15
Link Distance (ft)	317	2285
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9004: Stillwell Road & , Interval #2

Movement	NB	SB
Directions Served	L	R
Maximum Queue (ft)	97	25
Average Queue (ft)	64	7
95th Queue (ft)	106	24
Link Distance (ft)	317	2285
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9004: Stillwell Road & , Interval #3

Movement	NB	SB
Directions Served	L	R
Maximum Queue (ft)	136	141
Average Queue (ft)	75	13
95th Queue (ft)	105	49
Link Distance (ft)	317	2285
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9004: Stillwell Road & , Interval #4

Movement	NB	SB	SB
Directions Served	L	T	R
Maximum Queue (ft)	178	31	125
Average Queue (ft)	106	4	35
95th Queue (ft)	207	22	101
Link Distance (ft)	317	2285	2285
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9004: Stillwell Road & , All Intervals

Movement	NB	SB	SB
Directions Served	L	T	R
Maximum Queue (ft)	178	31	141
Average Queue (ft)	77	1	15
95th Queue (ft)	148	10	59
Link Distance (ft)	317	2285	2285
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9005: Stillwell Road & , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , Interval #3

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , Interval #4

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , All Intervals

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9006: Mellen Street & , Interval #1

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	200	157	438
Average Queue (ft)	120	129	215
95th Queue (ft)	215	184	434
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)	0.06		
Queuing Penalty (veh)	23		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , Interval #2

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	184	55	292
Average Queue (ft)	133	16	155
95th Queue (ft)	218	49	293
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)	0.05		
Queuing Penalty (veh)	18		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , Interval #3

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	203	137	288
Average Queue (ft)	155	27	164
95th Queue (ft)	256	107	261
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)	0.13		
Queuing Penalty (veh)	57		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , Interval #4

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	224	55	220
Average Queue (ft)	161	20	119
95th Queue (ft)	255	58	213
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)	0.14		
Queuing Penalty (veh)	54		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , All Intervals

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	224	157	438
Average Queue (ft)	142	48	163
95th Queue (ft)	240	143	320
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)	0.09		
Queuing Penalty (veh)	38		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Nework Summary

Network wide Queuing Penalty, Interval #1: 1221
Network wide Queuing Penalty, Interval #2: 1252
Network wide Queuing Penalty, Interval #3: 2692
Network wide Queuing Penalty, Interval #4: 2320
Network wide Queuing Penalty, All Intervals: 1871

Intersection: 6: Hope St & County St, Interval #1

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	29
Average Queue (ft)	21	4
95th Queue (ft)	44	21
Link Distance (ft)	274	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hope St & County St, Interval #2

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	27
Average Queue (ft)	13	11
95th Queue (ft)	36	33
Link Distance (ft)	274	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hope St & County St, Interval #3

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	51	28	30
Average Queue (ft)	11	14	4
95th Queue (ft)	43	35	22
Link Distance (ft)	274	514	412
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Hope St & County St, Interval #4

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	29
Average Queue (ft)	13	19
95th Queue (ft)	39	38
Link Distance (ft)	274	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Hope St & County St, All Intervals

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	51	29	30
Average Queue (ft)	15	12	1
95th Queue (ft)	41	34	10
Link Distance (ft)	274	514	412
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Mellen St & , Interval #1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	28	24	50	21
Average Queue (ft)	12	13	7	0
95th Queue (ft)	34	31	36	0
Link Distance (ft)	858	288	536	435
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9: Mellen St & , Interval #2

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	26	23
Average Queue (ft)	4	12
95th Queue (ft)	19	29
Link Distance (ft)	858	288
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Mellen St & , Interval #3

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	28	24	28
Average Queue (ft)	11	3	8
95th Queue (ft)	32	17	28
Link Distance (ft)	858	288	536
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Mellen St & , Interval #4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	28	24	29	27
Average Queue (ft)	7	11	8	4
95th Queue (ft)	25	29	29	20
Link Distance (ft)	858	288	536	435
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9: Mellen St & , All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	28	24	50	27
Average Queue (ft)	8	10	6	1
95th Queue (ft)	28	28	27	9
Link Distance (ft)	858	288	536	435
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	29	32	72
Average Queue (ft)	17	12	20	33
95th Queue (ft)	42	36	43	81
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, Interval #2

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	51	51	31	72
Average Queue (ft)	24	15	14	32
95th Queue (ft)	52	46	35	80
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, Interval #3

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	50	29	31	72
Average Queue (ft)	24	16	12	27
95th Queue (ft)	52	39	36	70
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, Interval #4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	30	51	24	74
Average Queue (ft)	26	15	3	48
95th Queue (ft)	43	46	17	87
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Hope St & Mellen St, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	51	51	32	74
Average Queue (ft)	23	15	13	35
95th Queue (ft)	48	42	36	81
Link Distance (ft)	785	274	411	427
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: County St & , Interval #1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	29
95th Queue (ft)	33
Link Distance (ft)	450
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: County St & , Interval #2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	26
95th Queue (ft)	44
Link Distance (ft)	450
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: County St & , Interval #3

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	28
95th Queue (ft)	32
Link Distance (ft)	450
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: County St & , Interval #4

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	32	47
Average Queue (ft)	5	28
95th Queue (ft)	23	50
Link Distance (ft)	288	450
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: County St & , All Intervals

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	32	47
Average Queue (ft)	1	28
95th Queue (ft)	11	42
Link Distance (ft)	288	450
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Willard Ave & Mercury Blvd, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	32	31	23	25
Average Queue (ft)	5	4	6	4
95th Queue (ft)	23	22	21	18
Link Distance (ft)	548	681	3359	1304
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 19: Willard Ave & Mercury Blvd, Interval #2

Movement	EB	SB
Directions Served	LTR	LT
Maximum Queue (ft)	29	52
Average Queue (ft)	0	0
95th Queue (ft)	0	0
Link Distance (ft)	548	1304
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Willard Ave & Mercury Blvd, Interval #3

Movement	EB	SB
Directions Served	LTR	LT
Maximum Queue (ft)	31	24
Average Queue (ft)	13	3
95th Queue (ft)	37	18
Link Distance (ft)	548	1304
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Willard Ave & Mercury Blvd, Interval #4

Movement	EB	WB	SB	SB
Directions Served	LTR	LTR	LT	TR
Maximum Queue (ft)	31	31	25	21
Average Queue (ft)	9	9	4	6
95th Queue (ft)	32	31	18	20
Link Distance (ft)	548	681	1304	1304
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 19: Willard Ave & Mercury Blvd, All Intervals

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LT	LT	TR
Maximum Queue (ft)	32	31	23	52	21
Average Queue (ft)	7	3	1	3	1
95th Queue (ft)	27	19	10	15	10
Link Distance (ft)	548	681	3359	1304	1304
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 23: Mallory St & Libbey St, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	32	134	30	74
Average Queue (ft)	13	63	14	35
95th Queue (ft)	38	162	35	66
Link Distance (ft)		913	445	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.00			
Queuing Penalty (veh)	0			

Intersection: 23: Mallory St & Libbey St, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	51	133	50	31
Average Queue (ft)	33	47	26	24
95th Queue (ft)	45	126	49	29
Link Distance (ft)		913	445	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.02			
Queuing Penalty (veh)	8			

Intersection: 23: Mallory St & Libbey St, Interval #3

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	32	54	50
Average Queue (ft)	18	25	23
95th Queue (ft)	44	54	45
Link Distance (ft)		445	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	50		
Storage Blk Time (%)	0.00		
Queuing Penalty (veh)	0		

Intersection: 23: Mallory St & Libbey St, Interval #4

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	53	112	68	42
Average Queue (ft)	22	25	38	15
95th Queue (ft)	55	91	65	36
Link Distance (ft)		913	445	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.04			
Queuing Penalty (veh)	16			

Intersection: 23: Mallory St & Libbey St, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LT	LTR	LTR
Maximum Queue (ft)	53	134	68	74
Average Queue (ft)	21	34	26	24
95th Queue (ft)	49	115	55	49
Link Distance (ft)		913	445	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0.02			
Queuing Penalty (veh)	6			

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	68	44	43	307	207	117	54	276	332
Average Queue (ft)	23	16	6	186	84	61	35	275	331
95th Queue (ft)	43	46	31	375	208	126	63	276	333
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)				0.01					0.28
Queuing Penalty (veh)				4					0
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.01	0.01		0.34	
Queuing Penalty (veh)					2	2		24	

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	89	24	19	217	95	115	95	276	332
Average Queue (ft)	33	9	3	155	59	43	58	275	331
95th Queue (ft)	80	24	14	205	121	97	106	276	333
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)									0.30
Queuing Penalty (veh)									0
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.01	0.00		0.36	
Queuing Penalty (veh)					3	0		26	

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #3

Movement	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	LT	T	R	LTR	L	TR
Maximum Queue (ft)	87	13	258	161	76	95	276	343
Average Queue (ft)	37	2	211	77	37	58	275	288
95th Queue (ft)	94	9	275	171	75	99	276	453
Link Distance (ft)		561	297	297		446		317
Upstream Blk Time (%)								0.16
Queuing Penalty (veh)								0
Storage Bay Dist (ft)	200				100		250	
Storage Blk Time (%)				0.00			0.26	
Queuing Penalty (veh)				0			21	

Intersection: 24: Mallory St & I-64 WB Off/ On, Interval #4

Movement	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	LT	T	R	LTR	L	TR
Maximum Queue (ft)	67	289	50	73	96	275	332
Average Queue (ft)	20	163	22	45	30	274	329
95th Queue (ft)	57	311	56	80	84	275	335
Link Distance (ft)		297	297		446		317
Upstream Blk Time (%)		0.00					0.29
Queuing Penalty (veh)		1					0
Storage Bay Dist (ft)	200			100		250	
Storage Blk Time (%)						0.35	
Queuing Penalty (veh)						25	

Intersection: 24: Mallory St & I-64 WB Off/ On, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	T	R	LTR	L	TR
Maximum Queue (ft)	89	44	43	307	207	117	96	276	343
Average Queue (ft)	28	7	2	179	60	47	45	275	320
95th Queue (ft)	73	27	16	311	155	98	94	276	408
Link Distance (ft)		561	561	297	297		446		317
Upstream Blk Time (%)				0.00					0.26
Queuing Penalty (veh)				1					0
Storage Bay Dist (ft)	200					100		250	
Storage Blk Time (%)					0.00	0.00		0.33	
Queuing Penalty (veh)					1	1		24	

Intersection: 25: Mallory St & I-64 EB Off, Interval #1

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LR
Maximum Queue (ft)	69	52	275	350	30	245
Average Queue (ft)	34	27	180	98	9	187
95th Queue (ft)	69	50	318	339	31	235
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.03			
Queuing Penalty (veh)			1			

Intersection: 25: Mallory St & I-64 EB Off, Interval #2

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LR
Maximum Queue (ft)	86	95	276	343	30	420
Average Queue (ft)	50	54	174	53	16	229
95th Queue (ft)	83	98	326	249	38	426
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.04			
Queuing Penalty (veh)			1			

Intersection: 25: Mallory St & I-64 EB Off, Interval #3

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LR
Maximum Queue (ft)	71	52	276	397	31	352
Average Queue (ft)	36	40	182	160	13	246
95th Queue (ft)	63	58	332	450	37	345
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.06			
Queuing Penalty (veh)			2			

Intersection: 25: Mallory St & I-64 EB Off, Interval #4

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LR
Maximum Queue (ft)	69	74	290	510	30	286
Average Queue (ft)	28	39	176	194	4	174
95th Queue (ft)	64	64	337	554	18	279
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.06			
Queuing Penalty (veh)			2			

Intersection: 25: Mallory St & I-64 EB Off, All Intervals

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	TR	L	T	T	LR
Maximum Queue (ft)	86	95	290	510	31	420
Average Queue (ft)	37	40	178	126	10	209
95th Queue (ft)	73	73	328	419	33	343
Link Distance (ft)	1789	1789		561	561	580
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			
Storage Blk Time (%)			0.04			
Queuing Penalty (veh)			2			

Intersection: 30: Mellen St & , Interval #1

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	30	30	31
Average Queue (ft)	11	9	8
95th Queue (ft)	33	31	30
Link Distance (ft)	908	310	435
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Mellen St & , Interval #2

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	29
Average Queue (ft)	0	17
95th Queue (ft)	0	40
Link Distance (ft)	908	310
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Mellen St & , Interval #3

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	30	30	53	51
Average Queue (ft)	8	8	16	7
95th Queue (ft)	29	31	48	37
Link Distance (ft)	908	310	435	411
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 30: Mellen St & , Interval #4

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	30	30	31
Average Queue (ft)	7	13	4
95th Queue (ft)	27	37	22
Link Distance (ft)	908	310	435
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Mellen St & , All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	30	30	53	51
Average Queue (ft)	7	12	7	2
95th Queue (ft)	26	35	30	18
Link Distance (ft)	908	310	435	411
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 32: County St & , Interval #1

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	29	30
Average Queue (ft)	8	21
95th Queue (ft)	29	42
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: County St & , Interval #2

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	30
Average Queue (ft)	16	4
95th Queue (ft)	40	22
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: County St & , Interval #3

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	29	30
Average Queue (ft)	16	12
95th Queue (ft)	39	35
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: County St & , Interval #4

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	29	30
Average Queue (ft)	4	15
95th Queue (ft)	21	38
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: County St & , All Intervals

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	30
Average Queue (ft)	11	13
95th Queue (ft)	34	36
Link Distance (ft)	310	483
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 40: Mallory St & Atlantic Ave, Interval #1

Movement	EB	NB	SB
Directions Served	TR	LTR	LTR
Maximum Queue (ft)	20	50	53
Average Queue (ft)	3	38	45
95th Queue (ft)	14	55	61
Link Distance (ft)	8838	1071	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Mallory St & Atlantic Ave, Interval #2

Movement	EB	NB	SB
Directions Served	TR	LTR	LTR
Maximum Queue (ft)	21	96	92
Average Queue (ft)	6	51	49
95th Queue (ft)	22	89	82
Link Distance (ft)	8838	1071	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Mallory St & Atlantic Ave, Interval #3

Movement	EB	EB	NB	SB
Directions Served	LT	TR	LTR	LTR
Maximum Queue (ft)	26	21	116	110
Average Queue (ft)	7	0	61	55
95th Queue (ft)	26	0	111	94
Link Distance (ft)	8838	8838	1071	481
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 40: Mallory St & Atlantic Ave, Interval #4

Movement	EB	NB	SB
Directions Served	TR	LTR	LTR
Maximum Queue (ft)	16	94	73
Average Queue (ft)	2	68	51
95th Queue (ft)	11	97	68
Link Distance (ft)	8838	1071	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Mallory St & Atlantic Ave, All Intervals

Movement	EB	EB	NB	SB
Directions Served	LT	TR	LTR	LTR
Maximum Queue (ft)	26	21	116	110
Average Queue (ft)	2	3	54	50
95th Queue (ft)	13	14	95	79
Link Distance (ft)	8838	8838	1071	481
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 48: Mallory St & Mellen St, Interval #1

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	157	263	202	74	226	228	25
Average Queue (ft)	82	110	141	47	188	168	6
95th Queue (ft)	137	251	214	79	248	230	22
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, Interval #2

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	133	303	158	84	228	228	27
Average Queue (ft)	88	134	114	43	148	170	6
95th Queue (ft)	153	277	172	96	238	267	23
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, Interval #3

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	130	482	266	216	225	228	50
Average Queue (ft)	87	229	184	81	168	184	13
95th Queue (ft)	146	421	258	162	232	253	42
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)			0.01				
Queuing Penalty (veh)			4				
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, Interval #4

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	157	280	269	246	228	223	53
Average Queue (ft)	85	157	203	126	201	190	30
95th Queue (ft)	146	283	307	270	241	247	57
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)			0.17	0.04			
Queuing Penalty (veh)			47	11			
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 48: Mallory St & Mellen St, All Intervals

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	LTR	LTR
Maximum Queue (ft)	157	482	269	246	228	228	53
Average Queue (ft)	86	158	160	74	176	178	14
95th Queue (ft)	146	327	258	178	250	253	42
Link Distance (ft)	913	913	246	246	427	427	280
Upstream Blk Time (%)			0.05	0.01			
Queuing Penalty (veh)			13	3			
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 49: Mallory St & Mercury Blvd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	91	92	91	67	157	136	408	430	463	392
Average Queue (ft)	54	64	76	37	135	90	242	215	304	274
95th Queue (ft)	90	96	101	71	172	152	337	308	428	384
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)									0.02	
Queuing Penalty (veh)									0	
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	91	110	109	51	180	177	306	308	476	476
Average Queue (ft)	59	75	81	16	113	100	233	218	372	345
95th Queue (ft)	83	121	124	45	181	178	329	321	500	457
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)									0.10	0.03
Queuing Penalty (veh)									0	0
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	109	89	89	51	246	171	395	332	476	491
Average Queue (ft)	58	52	58	30	125	101	277	263	474	470
95th Queue (ft)	115	95	90	63	192	174	407	364	479	503
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)									0.63	0.58
Queuing Penalty (veh)									0	0
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	113	114	129	70	217	152	390	351	495	476
Average Queue (ft)	75	60	65	23	133	86	258	234	476	476
95th Queue (ft)	124	110	121	65	211	147	392	348	477	476
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)									0.72	0.71
Queuing Penalty (veh)									0	0
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 49: Mallory St & Mercury Blvd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LT	TR	LT	TR
Maximum Queue (ft)	113	114	129	70	246	177	408	430	495	491
Average Queue (ft)	62	63	70	27	126	94	252	232	407	391
95th Queue (ft)	107	108	114	64	192	164	371	340	556	553
Link Distance (ft)		1115	1115	2628	2628	2628	1304	1304	461	461
Upstream Blk Time (%)									0.37	0.33
Queuing Penalty (veh)									0	0
Storage Bay Dist (ft)	200									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 52: Mallory St & County St, Interval #1

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	49	27	27	50	72	71	77
Average Queue (ft)	23	7	16	14	23	26	39
95th Queue (ft)	50	27	33	44	70	59	76
Link Distance (ft)	246	246	1115	1115	416	379	379
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 52: Mallory St & County St, Interval #2

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	92	10	26	50	32	97	45
Average Queue (ft)	25	1	6	11	20	31	27
95th Queue (ft)	75	7	21	42	41	83	48
Link Distance (ft)	246	246	1115	1115	416	379	379
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 52: Mallory St & County St, Interval #3

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	51	27	51	50	69	115	78
Average Queue (ft)	32	0	13	14	32	51	41
95th Queue (ft)	62	0	43	44	71	114	58
Link Distance (ft)	246	246	1115	1115	416	379	379
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 52: Mallory St & County St, Interval #4

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	72	25	139	110	49	76	114
Average Queue (ft)	32	9	55	42	20	45	63
95th Queue (ft)	73	28	128	109	48	74	111
Link Distance (ft)	246	246	1115	1115	416	379	379
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 52: Mallory St & County St, All Intervals

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	LT	TR	LT	TR	LTR	LT	R
Maximum Queue (ft)	92	27	139	110	72	115	114
Average Queue (ft)	28	5	22	20	24	38	43
95th Queue (ft)	67	20	74	68	60	87	82
Link Distance (ft)	246	246	1115	1115	416	379	379
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 53: Libbey St & County St, Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 53: Libbey St & County St, Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 53: Libbey St & County St, Interval #3

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 53: Libbey St & County St, Interval #4

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 53: Libbey St & County St, All Intervals

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 63: Settlers Landing Road & County St, Interval #1

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	75	376	32	240	330	86	108	22
Average Queue (ft)	22	76	18	105	169	55	68	8
95th Queue (ft)	69	285	39	215	332	91	118	25
Link Distance (ft)	361	361		1134	1134		289	
Upstream Blk Time (%)		0.03						
Queuing Penalty (veh)		18						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)		0.00		0.01				
Queuing Penalty (veh)		0		0				

Intersection: 63: Settlers Landing Road & County St, Interval #2

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	31	356	32	200	114	69	84	22
Average Queue (ft)	4	61	9	112	80	42	62	11
95th Queue (ft)	22	262	29	226	123	65	83	27
Link Distance (ft)	361	361		1134	1134		289	
Upstream Blk Time (%)		0.01						
Queuing Penalty (veh)		5						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)				0.02				
Queuing Penalty (veh)				0				

Intersection: 63: Settlers Landing Road & County St, Interval #3

Movement	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	L	T	T	L	L	R
Maximum Queue (ft)	356	32	115	160	109	107	22
Average Queue (ft)	206	17	43	73	74	85	9
95th Queue (ft)	487	41	97	134	134	108	26
Link Distance (ft)	361		1134	1134		289	
Upstream Blk Time (%)	0.03						
Queuing Penalty (veh)	24						
Storage Bay Dist (ft)		150			150		150
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 63: Settlers Landing Road & County St, Interval #4

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	31	370	31	114	139	69	129	21
Average Queue (ft)	11	166	13	77	87	49	88	6
95th Queue (ft)	34	445	34	119	151	81	139	21
Link Distance (ft)	361	361		1134	1134		289	
Upstream Blk Time (%)		0.04						
Queuing Penalty (veh)		27						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 63: Settlers Landing Road & County St, All Intervals

Movement	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	L	T	T	L	L	R
Maximum Queue (ft)	75	376	32	240	330	109	129	22
Average Queue (ft)	9	127	14	84	102	55	76	9
95th Queue (ft)	40	392	36	181	217	100	119	25
Link Distance (ft)	361	361		1134	1134		289	
Upstream Blk Time (%)		0.03						
Queuing Penalty (veh)		18						
Storage Bay Dist (ft)			150			150		150
Storage Blk Time (%)		0.00		0.01				
Queuing Penalty (veh)		0		0				

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #1

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	TR	L	LT
Maximum Queue (ft)	165	112	132	451	388	100	68
Average Queue (ft)	100	80	105	232	216	46	35
95th Queue (ft)	148	114	135	454	433	95	68
Link Distance (ft)		311	311	361	361		769
Upstream Blk Time (%)				0.01	0.03		
Queuing Penalty (veh)				4	18		
Storage Bay Dist (ft)	200					200	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #2

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	TR	L	LT
Maximum Queue (ft)	145	159	179	280	364	192	91
Average Queue (ft)	90	101	120	160	154	74	59
95th Queue (ft)	150	160	182	275	328	159	101
Link Distance (ft)		311	311	361	361		769
Upstream Blk Time (%)					0.00		
Queuing Penalty (veh)					1		
Storage Bay Dist (ft)	200					200	
Storage Blk Time (%)						0.00	
Queuing Penalty (veh)						0	

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #3

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	TR	L	LT
Maximum Queue (ft)	171	114	134	344	342	120	92
Average Queue (ft)	86	68	96	157	210	60	57
95th Queue (ft)	167	103	144	306	382	117	105
Link Distance (ft)		311	311	361	361		769
Upstream Blk Time (%)				0.00	0.00		
Queuing Penalty (veh)				0	0		
Storage Bay Dist (ft)	200					200	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), Interval #4

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	TR	L	LT
Maximum Queue (ft)	121	140	181	240	322	80	89
Average Queue (ft)	71	96	96	108	122	46	66
95th Queue (ft)	113	147	180	215	289	79	90
Link Distance (ft)		311	311	361	361		769
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	200					200	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 64: Settlers Landing Road & I-64 WB On (Woodland), All Intervals

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	TR	L	LT
Maximum Queue (ft)	171	159	181	451	388	192	92
Average Queue (ft)	87	86	104	164	175	56	54
95th Queue (ft)	149	137	166	336	370	119	97
Link Distance (ft)		311	311	361	361		769
Upstream Blk Time (%)				0.00	0.01		
Queuing Penalty (veh)				1	5		
Storage Bay Dist (ft)	200					200	
Storage Blk Time (%)						0.00	
Queuing Penalty (veh)						0	

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #1

Movement	EB	EB	EB	WB
Directions Served	T	T	R	L
Maximum Queue (ft)	57	58	50	160
Average Queue (ft)	26	20	7	113
95th Queue (ft)	54	52	36	183
Link Distance (ft)	341	341	341	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				200
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #2

Movement	EB	EB	EB	WB
Directions Served	T	T	R	L
Maximum Queue (ft)	79	57	22	225
Average Queue (ft)	20	22	3	114
95th Queue (ft)	65	50	16	215
Link Distance (ft)	341	341	341	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				200
Storage Blk Time (%)				0.02
Queuing Penalty (veh)				5

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #3

Movement	EB	EB	EB	WB
Directions Served	T	T	R	L
Maximum Queue (ft)	77	59	35	178
Average Queue (ft)	27	30	5	129
95th Queue (ft)	76	70	25	188
Link Distance (ft)	341	341	341	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				200
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), Interval #4

Movement	EB	EB	EB	WB
Directions Served	T	T	R	L
Maximum Queue (ft)	58	38	35	161
Average Queue (ft)	15	17	5	113
95th Queue (ft)	46	41	25	201
Link Distance (ft)	341	341	341	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				200
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 69: Settlers Landing Road & I-64 EB On (Woodland), All Intervals

Movement	EB	EB	EB	WB
Directions Served	T	T	R	L
Maximum Queue (ft)	79	59	50	225
Average Queue (ft)	22	22	5	117
95th Queue (ft)	62	55	26	199
Link Distance (ft)	341	341	341	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				200
Storage Blk Time (%)				0.00
Queuing Penalty (veh)				1

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	198	193	73	193	107	131	56	53	251	260	340	60
Average Queue (ft)	157	132	43	138	56	71	28	29	242	257	339	42
95th Queue (ft)	201	192	80	200	110	127	57	58	263	264	340	73
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)											0.45	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)				0.00					0.47	0.25		
Queuing Penalty (veh)				0					26	14		

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	217	191	176	203	86	72	35	74	251	260	340	77
Average Queue (ft)	143	120	80	102	44	61	16	35	240	259	338	48
95th Queue (ft)	222	199	168	196	71	80	37	70	252	263	343	90
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)											0.43	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)				0.00					0.54	0.30		
Queuing Penalty (veh)				1					30	17		

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	193	173	92	185	110	114	58	137	250	261	340	102
Average Queue (ft)	133	108	60	89	59	73	16	60	244	257	339	54
95th Queue (ft)	190	169	92	179	113	107	46	137	260	265	340	66
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)											0.41	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)				0.00					0.44	0.32		
Queuing Penalty (veh)				0					29	21		

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	190	177	136	124	85	93	78	117	249	261	340	143
Average Queue (ft)	121	124	57	60	52	73	13	36	235	260	338	60
95th Queue (ft)	177	179	124	124	90	101	46	93	268	261	342	137
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)											0.44	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)									0.35	0.34		
Queuing Penalty (veh)									19	19		

Intersection: 72: Settlers Landing Road & I-64 EB OffRamp (Woodland), All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	TR	L	T	T	L	R	L	L	T	TR
Maximum Queue (ft)	217	193	176	203	110	131	78	137	251	261	340	143
Average Queue (ft)	139	121	60	97	53	69	18	40	240	258	338	51
95th Queue (ft)	202	187	124	189	98	107	48	97	263	264	342	99
Link Distance (ft)	943	943			341	341		839			324	324
Upstream Blk Time (%)											0.43	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)			450	200			400		225	225		
Storage Blk Time (%)				0.00					0.45	0.30		
Queuing Penalty (veh)				0					26	18		

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #1

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	332	201	237	224	206	55
Average Queue (ft)	289	110	134	138	123	37
95th Queue (ft)	341	190	210	210	212	55
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #2

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	502	488	562	560	245	138
Average Queue (ft)	356	314	266	140	148	53
95th Queue (ft)	589	571	508	427	245	137
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #3

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	386	159	694	694	285	117
Average Queue (ft)	300	99	693	691	134	55
95th Queue (ft)	384	169	694	698	302	132
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)			0.79	0.54		
Queuing Penalty (veh)			0	0		
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9001: Eustis Lane & Stillwell Road, Interval #4

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	375	152	694	713	398	138
Average Queue (ft)	304	102	693	695	200	38
95th Queue (ft)	397	165	694	707	427	120
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)			0.72	0.44	0.00	
Queuing Penalty (veh)			0	0	1	
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9001: Eustis Lane & Stillwell Road, All Intervals

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	502	488	694	713	398	138
Average Queue (ft)	312	156	447	416	151	46
95th Queue (ft)	454	364	880	896	315	118
Link Distance (ft)	559	559	679	679	406	406
Upstream Blk Time (%)			0.38	0.24	0.00	
Queuing Penalty (veh)			0	0	0	
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #1

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	380	352	663	523	450
Average Queue (ft)	205	95	455	302	54
95th Queue (ft)	350	148	676	466	104
Link Distance (ft)	559	559	648	458	458
Upstream Blk Time (%)			0.01	0.02	0.01
Queuing Penalty (veh)			0	11	3
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #2

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	570	608	663	524	525
Average Queue (ft)	552	507	663	515	269
95th Queue (ft)	584	767	663	530	594
Link Distance (ft)	559	559	648	458	458
Upstream Blk Time (%)	0.25	0.17	0.54	0.63	0.04
Queuing Penalty (veh)	61	40	0	297	18
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #3

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	574	609	664	524	504
Average Queue (ft)	564	584	663	517	288
95th Queue (ft)	571	640	664	532	545
Link Distance (ft)	559	559	648	458	458
Upstream Blk Time (%)	0.59	0.28	0.60	0.53	0.06
Queuing Penalty (veh)	157	76	0	281	34
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9002: Eustis Lane & Ingalls Road, Interval #4

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	576	574	682	524	525
Average Queue (ft)	557	387	665	520	171
95th Queue (ft)	600	722	676	530	428
Link Distance (ft)	559	559	648	458	458
Upstream Blk Time (%)	0.31	0.14	0.60	0.66	
Queuing Penalty (veh)	75	34	0	310	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9002: Eustis Lane & Ingalls Road, All Intervals

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	576	609	682	524	525
Average Queue (ft)	469	393	611	463	196
95th Queue (ft)	733	768	797	639	485
Link Distance (ft)	559	559	648	458	458
Upstream Blk Time (%)	0.29	0.15	0.44	0.46	0.03
Queuing Penalty (veh)	73	37	0	225	14
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9003: Ingalls Road & , Interval #1

Movement	SB
Directions Served	T
Maximum Queue (ft)	43
Average Queue (ft)	0
95th Queue (ft)	0
Link Distance (ft)	387
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9003: Ingalls Road & , Interval #2

Movement	SB
Directions Served	T
Maximum Queue (ft)	416
Average Queue (ft)	377
95th Queue (ft)	470
Link Distance (ft)	387
Upstream Blk Time (%)	0.20
Queuing Penalty (veh)	185
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9003: Ingalls Road & , Interval #3

Movement	SB
Directions Served	T
Maximum Queue (ft)	412
Average Queue (ft)	405
95th Queue (ft)	411
Link Distance (ft)	387
Upstream Blk Time (%)	0.31
Queuing Penalty (veh)	329
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9003: Ingalls Road & , Interval #4

Movement	SB
Directions Served	T
Maximum Queue (ft)	442
Average Queue (ft)	411
95th Queue (ft)	434
Link Distance (ft)	387
Upstream Blk Time (%)	0.41
Queuing Penalty (veh)	391
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9003: Ingalls Road & , All Intervals

Movement	SB
Directions Served	T
Maximum Queue (ft)	442
Average Queue (ft)	298
95th Queue (ft)	587
Link Distance (ft)	387
Upstream Blk Time (%)	0.23
Queuing Penalty (veh)	226
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9004: Stillwell Road & , Interval #1

Movement	SB
Directions Served	R
Maximum Queue (ft)	32
Average Queue (ft)	5
95th Queue (ft)	23
Link Distance (ft)	2285
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9004: Stillwell Road & , Interval #2

Movement	SB
Directions Served	R
Maximum Queue (ft)	414
Average Queue (ft)	76
95th Queue (ft)	202
Link Distance (ft)	2285
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9004: Stillwell Road & , Interval #3

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	1334	1313
Average Queue (ft)	1132	1110
95th Queue (ft)	1524	1494
Link Distance (ft)	2285	2285
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9004: Stillwell Road & , Interval #4

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	1472	1437
Average Queue (ft)	1363	1317
95th Queue (ft)	1504	1459
Link Distance (ft)	2285	2285
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9004: Stillwell Road & , All Intervals

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	1472	1437
Average Queue (ft)	624	627
95th Queue (ft)	1682	1626
Link Distance (ft)	2285	2285
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9005: Stillwell Road & , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , Interval #3

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , Interval #4

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9005: Stillwell Road & , All Intervals

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 9006: Mellen Street & , Interval #1

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	199	119	203
Average Queue (ft)	134	79	109
95th Queue (ft)	202	135	208
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)	0.02		
Queuing Penalty (veh)	6		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , Interval #2

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	208	133	419
Average Queue (ft)	181	57	266
95th Queue (ft)	220	146	461
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)	0.46		
Queuing Penalty (veh)	114		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , Interval #3

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	209	75	804
Average Queue (ft)	200	28	571
95th Queue (ft)	215	70	877
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)	0.89		
Queuing Penalty (veh)	245		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , Interval #4

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	208	225	800
Average Queue (ft)	193	112	575
95th Queue (ft)	214	217	909
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)	0.91		
Queuing Penalty (veh)	226		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9006: Mellen Street & , All Intervals

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	209	225	804
Average Queue (ft)	177	69	380
95th Queue (ft)	236	161	796
Link Distance (ft)	178	387	1570
Upstream Blk Time (%)	0.57		
Queuing Penalty (veh)	148		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Nework Summary

Network wide Queuing Penalty, Interval #1: 136
Network wide Queuing Penalty, Interval #2: 812
Network wide Queuing Penalty, Interval #3: 1224
Network wide Queuing Penalty, Interval #4: 1205
Network wide Queuing Penalty, All Intervals: 844