APPENDIX A

PUBLIC INVOLVEMENT

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A.1 INTRODUCTION

This appendix presents a summary of the public participation efforts for the *Environmental Impact Statement (EIS) for Multiple Projects in Support of Marine Barracks Washington* (MBW). Many opportunities have been available for public participation in the environmental analysis process, including a scoping session and comment period and agency notification and consultation. These efforts were used to identify issues addressed in the Draft EIS.

A.2 SCOPING PERIOD

Scoping is an early phase of the NEPA process designed to obtain comments from the public and other interested parties, and is used to determine the breadth and depth of an environmental analysis and identify any potential additional alternatives for consideration in the analysis. The scoping period for the EIS officially began with the publication of the United States Department of the Navy (DON) Notice of Intent (NOI) to prepare an EIS in the *Federal Register* on 6 September 2013. A public scoping meeting was held in Washington, DC at Tyler Elementary School on 24 September 2013. To announce the Marine Corps proposal, scoping letters were mailed to federal, state, and local governmental agencies, elected officials, and other interested parties; advertisements were placed in local newspapers; and a public website was launched. The original closing date for the public scoping period was 7 October 2013; however, the closing date was extended to 25 October 2013 due to the partial government shutdown, which occurred 1 through 17 October 2013. While the comment period officially closed on 25 October 2013, the Marine Corps continued to accept and consider agency and public scoping input to the maximum extent possible during the preparation of the Draft EIS.

Notice of Intent

The DON and the U.S. Marine Corps provided official notification of the initiation of the public scoping period and intent to prepare the EIS in the Notice of Intent (NOI), published in the *Federal Register* on 6 September 2013 (Volume 78, No. 173). The NOI announced the public scoping meeting, provided information on submitting comments, and provided supplementary information on the purpose and need for the proposed action, the development of alternatives, and environmental compliance. The NOI also informed stakeholders that the public scoping meeting would provide an opportunity for the public to engage in the National Historic Preservation Act (NHPA) Section 106 process.

Concurrent with publication of the NOI in the *Federal Register*, an announcement of NOI publication and information about the public scoping meeting was published as one-eighth (1/8)-page display notices in local newspapers. The newspaper and publication dates are provided in Table A-1. Copies of the NOI in the *Federal Register* and newspaper tear sheets are provided in Attachment A.

Table A-1. Newspaper Display Ad Schedules

Newspapers	Publication Days/Dates
The Washington Post	6 September 2013 and 17 September 2013
The Washington Business Journal	6 September 2013 and 20 September 2013

Mailings

As part of the scoping process, 135 general scoping notification letters were sent to federal, state, local representatives and governmental agencies as well as non-governmental organizations and individuals most likely to be interested in the proposal, including all owners of land that is at or within 50 feet of each of the potential BEQ Complex sites. Many of the stakeholders who received notification letters were involved in the Community Integrated Master Plan (CIMP) process, which preceded this NEPA effort. The letters described the Proposed Action and alternatives, provided agencies with information on the upcoming scoping meeting, requested information applicable to the project, and solicited input regarding issues and/or concerns related to the Proposed Action and alternatives and the Section 106 consultation process.

Scoping notification letters were mailed on 18 September 2013. A sample copy of the letter is provided in Attachment B.

In addition, a letter of invitation to be a cooperating agency under NEPA was sent to the following stakeholders: Advisory Neighborhood Commission (ANC) 6B, ANC 6D, DC Department of Parks (DCDPR) and Recreation, DC Office of Planning (DCOP), DC Department of Consumer and Regulatory Affairs (DCDCRA), DC Department of Transportation (DDOT), National Capital Planning Commission (NCPC), and National Park Service.. All agency coordination letters are provided in Appendix B.

A letter initiating NHPA Section 106 consultation was sent to the DC Historic Preservation Office on 11 September 2013 and a letter inviting the following stakeholders to become consulting parties under Section 106 was mailed on 11 September 2013: ANC 6B, ANC 6D, Barracks Row Main Street, Capitol Hill Restoration Society (CHRS), National Park Service, and NCPC. These letters are provided in Appendix B.

Emails

Based on input received prior to and during the scoping meeting, the EIS Team initiated an additional form of notification of potential stakeholders via electronic mailings from a no-reply “MBW EIS” account. An email distribution list was developed based on a similar list developed during the pre-NEPA CIMP process. The earlier list was modified to include those who participated in the scoping process and provided an email address. The first email was sent on 30 September thanking those who participated in the scoping meeting and advising that the scoping comment period would be adjusted if a partial government shutdown were to occur. Subsequent emails sent on 10 October and 17 October provided information about the comment period extension during and at the close of the partial government shutdown and an email sent on 28 October provided a reminder regarding the end of the scoping period. Copies of the emails distributed to the email distribution list can be found in Attachment C.

Scoping Meeting

A public scoping meeting was held on Tuesday, 24 September 2013 at Tyler Elementary School (1001 G Street, SE). The meetings were held in an open-house format to create an informal and engaging atmosphere. This meeting style provided the public with an opportunity to review information about the proposal and to ask detailed questions of project representatives in an open, one-on-one setting. Attendees were welcomed at the entrance by Marine Corps representatives who ensured attendees

signed in, were provided factsheets, and provided an overview of the scoping meeting layout. Displays were designed to provide the public with information regarding the NEPA process, the purpose and need, how the Marine Corps will assess environmental impacts, the proposed action and alternatives, the CIMP process, the NHPA Section 106 Consultation process, and the public's role in shaping the proposal. Fact sheets distributed to attendees illustrated the information presented on the displays and provided a comment form to submit comments (Attachment D). Marine Corps personnel encouraged attendees to review the displays, fact sheets, and ask questions. They were also encouraged to formulate and submit comments

The scoping meeting was held from 4:30 PM to 8:30 PM with agency attendance the first hour and public attendance starting at 5:30 PM. A total of 24 stakeholders signed in at the scoping meeting, including Linda O'Brien (Staff for DC Councilman Tommy Wells, Ward 6), Kirsten Oldenburg (Commissioner, ANC 6B), Jennifer Hirsch (Federal Preservation Officer, NCPC), and a representative from the CHRS. No media attended the scoping meeting.

As summarized in Table A-2, the Marine Corps received a total of 22 comments during the public scoping period: 0 comment sheets at the scoping meetings, 10 electronic comments via the MBW EIS public website, 11 letters/comment packages via mail postmarked prior to the official close of the scoping period (25 October 2013), and one comment submitted via both the public website and mail. One of the comment letters was signed by 19 individual stakeholders. Any comments received after the scoping period ended were compiled and provided to the EIS team as they prepared the Draft EIS.

Table A-2. Number of Scoping Comments Received During the Scoping Period

	Number of Comments
Comments Received at the Scoping Meeting	0
Comments Received via Website	10
Comments Received via Mail	11
Comments Received via the Website and Mail	1
Total Comments Received	**22**

A.3 DRAFT EIS DISTRIBUTION

Upon release of the Draft EIS, a Notice of Availability/Notice of Public Meetings will be published in the *Federal Register*. The Draft EIS will then be distributed to the agencies, organizations, and individuals and be made available for general review at the libraries listed in Table A-3.

Table A-3. Library Locations for Distribution of the Draft EIS

Library	Street Address
Southeast Public Library	403 7th St. S.E., Washington D.C. 20003
Southwest Public Library	900 Wesley Place S.W., Washington D.C. 20004
Northeast Public Library	330 7th St. N.E., Washington D.C. 20022

Attachment E provides a list of the individuals and organizations receiving the Draft Environmental Impact Statement (EIS) for Multiple Projects in Support of Marine Barracks Washington (MBW).

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Attachment A: Federal Register, NOI, and Newspaper Ads

Federal Register / Vol. 78, No. 173 / Friday, September 6, 2013 / Notices 54873

Tacoma Convention Center, 1500 Broadway, Tacoma, Washington 98402 on Thursday, October 17, 2013, from 5:00 p.m. to 8:00 p.m.

In addition, an ''online scoping meeting'' will be continuously hosted on the EIS Internet Web site at *www.millenniumbulkeiswa.gov* for the duration of the scoping period.

b. Potentially significant issues to be analyzed in the EIS include, but are not limited to direct, indirect, and cumulative effects of the project-specific activities proposed within the NEPA scope of analysis as described above on navigation (e.g., vessel traffic and navigational safety); aquatic habitats; aquatic species, including Endangered Species Act-listed species and Washington State species of concern; Tribal treaty rights; wetland and riparian habitat; wildlife; vehicle traffic; cultural, historic, and archeological resources; air and water quality; noise; recreation; land use; and aesthetics.

c. The Corps will consult with the Washington State Historic Preservation Officer and applicable Tribes to comply with the National Historic Preservation Act; the U.S. Fish and Wildlife Service and National Marine Fisheries Service to comply with the Endangered Species Act; the National Marine Fisheries Service to comply with the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act; and applicable Tribes to comply with reserved treaty fishing rights.

d. Preparation of the draft EIS will begin after the close of the scoping period. The draft EIS is currently scheduled to be available for public review and comment by June 2015.

e. A 90-day public review period will be provided for interested parties to review and comment on the draft EIS. Interested parties are encouraged to contact the Corps if they wish to be notified when the draft EIS is issued.

f. All comments received will become part of the administrative record for this project and subject to public release to third-parties, including any personally identifiable information such as name, phone number, and address, included in the comment.

Dated: August 29, 2013.

Bruce A. Estok,

Colonel, Corps of Engineers, District Engineer.

[FR Doc. 2013–21780 Filed 9–5–13; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Intent To Prepare an Environmental Impact Statement for Multiple Projects in Support of the Marine Barracks Washington, District of Columbia

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: Pursuant to Section (102)(2)(c) of the National Environmental Policy Act (NEPA) of 1969, and regulations implemented by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] Parts 1500–1508), Department of the Navy (DoN) NEPA regulations (32 CFR Part 775), and United States Marine Corps (USMC) NEPA directives (Marine Corps Order P5090.2A, changes 1 and 2), the DoN intends to prepare an Environmental Impact Statement (EIS) for several proposed construction, repair, and renovation projects in support of the Marine Barracks Washington (MBW), District of Columbia (DC).

Dates and Addresses: The DoN, USMC, is initiating a 30-day public scoping process to identify community interests and local concerns to be addressed in the EIS, which starts with the publication of this Notice of Intent and ends on October 7, 2013. A public scoping meeting, using an informal open house format, will be held from 5:30 p.m. to 8:30 p.m. on September 24, 2013 at Tyler Elementary School, 1001 G St SE., Washington, DC 20390.

The public is invited to attend this meeting to view project-related displays, speak with USMC representatives, and submit verbal or written comments. All comments regarding the scope of issues that the USMC should consider during EIS preparation must be received prior to October 7, 2013 to be fully considered. Additional information concerning the meeting and the proposed alternatives is available on the EIS Web site at *www.mbweis.com* and will be announced in local and regional newspapers. Please submit requests for special assistance, sign language interpretation for the hearing impaired, or other auxiliary aids needed at the scoping meeting to the MBW Public Affairs Officer, Captain Jack Norton, at 202–433–6682 by September 13, 2013.

Concurrent with the NEPA process, the USMC is initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, one designated area of the room will focus on the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

Submitting Comments: Federal, state, and local agencies and members of the public are encouraged to provide oral and written comments regarding the scope of the EIS, reasonable alternatives, and specific issues or topics of interest. There are three ways comments can be submitted: (1) In person at the public scoping open house meeting, (2) using the project's public Web site comment form at *www.mbweis.com,* or (3) providing written comments through U.S. mail. All comments on the scope of the EIS or any specific concerns regarding potential impacts to the environment should be submitted or postmarked no later than October 1, 2013. Comments submitted by mail should be sent to: Mr. William Sadlon, MBW CIMP EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

The USMC will consider all comments received during the scoping period. A mailing list has been assembled to facilitate preparation of the EIS. This list includes DC and federal agencies with jurisdiction or other interests in the alternatives. In addition, the mailing list includes adjacent property owners and other interested parties, such as historic preservation groups. Those on this list will receive notices and documents related to EIS preparation. Anyone wishing to be added to the mailing list may request to be added at the project Web site *www.mbweis.com* or by contacting the EIS project manager at the address provided below.

FOR FURTHER INFORMATION CONTACT: Mr. William Sadlon, MBW EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

SUPPLEMENTARY INFORMATION: The USMC is preparing an EIS to analyze the potential effects resulting from implementation of several construction, repair, and renovation projects at or proximate to the Marine Barracks Washington scheduled for completion within the next 5 years. The principal project to be analyzed is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. Renovation and improvement projects include interior renovations to Buildings 7 and 8 at the Main Post; improvements to the MBW

received on the Draft EIS when preparing the Final EIS. The USMC intends to issue the Final EIS in Winter 2014/2015, at which time an NOA would be published in the **Federal Register** and local media.

A Record of Decision is anticipated in early 2015.

Dated: August 29, 2013.

P.A. Richelmi,

Lieutenant, Office of the Judge Advocate General, U.S. Navy, Alternate Federal Register Liaison Officer.

[FR Doc. 2013–21713 Filed 9–5–13; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF EDUCATION

[Docket No. ED–2013–ICCD–0118]

Agency Information Collection Activities; Comment Request; Application for Approval To Participate in Federal Student Financial Aid Programs

AGENCY: Federal Student Aid (FSA), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 *et seq.*), ED is proposing an extension of an existing information collection.

DATES: Interested persons are invited to submit comments on or before November 5, 2013.

ADDRESSES: Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting Docket ID number ED–2013–ICCD–0118 or via postal mail, commercial delivery, or hand delivery. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Room, 2E103 Washington, DC 20202–4537.

FOR FURTHER INFORMATION CONTACT: For questions related to collection activities or burden, please call Kate Mullan, 202–401–0563 or electronically mail *ICDocketMgr@ed.gov*. Please do not send comments here.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Application for Approval to Participate in Federal Student Financial Aid Programs

OMB Control Number: 1845–0012

Type of Review: An extension of an existing information collection.

Respondents/Affected Public: Private Sector, State, Local, or Tribal Governments

Total Estimated Number of Annual Responses: 7,246

Total Estimated Number of Annual Burden Hours: 24,352

Abstract: The Higher Education Act of 1965, as amended requires postsecondary institutions to complete and submit this application as a condition of eligibility for any of the Title IV student financial assistance programs and for the other postsecondary programs authorize by the HEA. The institution must submit the form (1) Initially when it first seeks to become eligible for the Title IV programs; (2) when its program participation agreement expires (recertification); (3) when it changes ownership, merges, or changes structure, (4) to be reinstated to participate in the Title IV programs, (5) to notify the Department when it makes certain changes, e.g. name or address; and (5) if it wishes to have a new program (outside its current scope) or new location approved for Title IV purposes.

Kate Mullan,

Acting Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management.

[FR Doc. 2013–21675 Filed 9–5–13; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Privacy Act of 1974; Computer Matching Program Between the Department of Education (ED) and the Social Security Administration (SSA)

AGENCY: Department of Education.

ACTION: Notice.

SUMMARY: Pursuant to the Computer Matching and Privacy Protection Act of 1988, the Computer Matching and Privacy Protections Amendments of 1990, and Office of Management and Budget (OMB) guidance on the conduct of computer matching programs, notice is hereby given of the renewal of the computer matching program between the ED (recipient agency), and the SSA (source agency). This renewal of the computer matching program will become effective as explained in paragraph 5.

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974 (5 U.S.C. 552a), as amended, OMB Final Guidance Interpreting the Provisions of Public Law 100–503, the Computer Matching and Privacy Protection Act of 1988, published in the **Federal Register** on June 19, 1989 (54 FR 25818), and OMB Circular No. A–130, Transmittal Memorandum #4, Management of Federal Information Resources (November 28, 2000), we provide the following information:

1. *Names of Participating Agencies.*

The U.S. Department of Education and the Social Security Administration.

2. *Purpose of the Match.*

The purpose of this matching program between ED and SSA is to assist the Secretary of Education with verification of immigration status and Social Security numbers (SSNs) under 20 U.S.C. 1091(g) and (p). SSA will verify the issuance of an SSN to, and will confirm the citizenship status of, those students and parents applying for financial assistance programs authorized under title IV of the Higher Education Act of 1965, as amended (HEA). Verification of this information by SSA will help ED satisfy its obligation to ensure that individuals applying for financial assistance meet

Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, pedestrian amenities, and landscaping throughout the installation. The EIS is also intended to provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available. Principal among these projects is the potential reuse of the Building 20 site. Other projects include renovation of Building 9 to accommodate relocation of units currently housed in temporary facilities aboard Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once these actions become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The purpose of the proposed action is to address existing and anticipated facility deficiencies at MBW. The proposed action is needed to better support the functions of the USMC units assigned to the MBW and, in the case of the BEQ Complex replacement project, to meet current requirements for adequate space and mission support functions, space configurations, DoD Quality of Life standards, life safety, sustainability, and energy efficiency, and Anti-Terrorism and Force Protection (AT/FP) requirements. Building 20 cannot be renovated or redesigned within its existing footprint to meet those standards. The renovations for Buildings 7 and 8 are to upgrade the buildings to meet certain AT/FP and life safety standards, improve space utilization, and meet sustainability goals. The improvements to the MBW Annex gate at 7th and K Streets and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation would blend MBW facilities with the neighborhood.

Alternatives Development: The action alternatives analyzed in the EIS regard implementation of specific projects. Sufficient detail is available to fully analyze some proposed projects in the EIS; other proposed projects are analyzed programmatically, with the expectation that additional NEPA analyses will be conducted when more detail is available.

The primary project to be analyzed in the EIS is the BEQ Complex replacement project, which includes the acquisition of land on which to construct the replacement facilities. The pre-NEPA agency and public engagement effort referred to as the Community Integrated Master Plan process that preceded this EIS effort provided a foundation for the required rigorous exploration of a reasonable range of alternative sites to meet the purpose and need with respect to the BEQ Complex replacement project. The following screening criteria were used to further refine and narrow the range of alternative sites for the BEQ Complex project.

The location must be within a 10-minute "reasonable walking distance" of the MBW Main Post Main Gate Entrance (defined as an approximately 2,000-foot radius of the Main Post Main Gate Entrance). The site must meet the minimum developable area requirements, including setback distances to meet AT/FP standards, while also complying with applicable laws governing height restrictions. The space requirement for the BEQ Complex is 191,405 square feet (SF), which includes supporting facilities and parking. Any site chosen must not be a site that currently provides or is planned to provide public services for DC residents, to include public housing, education, or public recreation services.

Based on the siting criteria, four potential sites have been identified for possible acquisition and development of facilities to meet the BEQ Complex replacement requirements. The four sites are defined in terms of squares and adjacent streets, as applicable. A "square" is the unit of land defined by the DC Surveyor that normally consists of a single city block and contains recorded tax lots.

Site A is a privately-owned 3.0-acre site composed of Square 929, Square 930, and L Street between 6th and 9th Streets. Site B is a privately-owned 1.8-acre site that encompasses Square 976 and a segment of L Street between 10th and 11th Streets. Site C comprises a portion of Square 853 just west of Washington Navy Yard in the Southeast Federal Center. The federally-owned 2.1-acre site is bound by M Street SE to the north and Tingey Street to the south. Site D, owned by the U.S. Navy, is approximately 2.2 acres and located on the northeast corner of Washington Navy Yard. It is bound by 11th Street SE to the east and M Street SE to the north and comprises portions of Squares 977 and 953 within the Washington Navy Yard boundary.

Implementation of the Site A alternative would require acquisition of both squares and closure of and construction on L Street between 8th and 9th Streets. Implementation of the 191,405 SF BEQ Complex at Site B would require the vehicular closure of L Street between 10th and 11th Streets and utilize the closed road right-of-way and a portion of existing Virginia Avenue Park open space buffer to satisfy vehicular AT/FP standoff requirements (while also not affecting use of the park). Implementation of Site C would allow for reduced AT/FP setbacks, given its adjacency to the Washington Navy Yard. If the Site D alternative was implemented, the BEQ Complex would be constructed entirely within the Washington Navy Yard boundary.

The No-Action Alternative for the BEQ Complex project is to continue to utilize and maintain the existing inadequate Building 20 BEQ Complex. The No-Action Alternative does not meet the purpose and need for the action, but must be analyzed as the baseline against which the impacts associated with action alternatives will be evaluated.

Alternatives for the renovation and improvement projects to be analyzed in detail in the EIS consist of alternative space layouts and functional space assignments for MBW units. In some cases, the alternatives may be limited to implementing the project or taking no action. The No Action Alternative for the renovation and improvement projects would be to not implement interior renovations, which would result in continued inefficient space utilization functional layouts and energy systems, life safety issues, and hindering MBW's ability to meet sustainability goals.

Environmental Compliance: The EIS would evaluate potential environmental effects associated with each of the alternatives for each of the analyzed projects on the following: safety, land use, recreation, air quality, socioeconomics and environmental justice, water resources, noise, cultural resources, natural resources, traffic/transportation, hazardous materials and waste, and utilities. Relevant and reasonable measures that could avoid or mitigate adverse environmental effects will also be analyzed. Additionally, the USMC will undertake consultations required by the National Historic Preservation Act and any other applicable laws or regulations.

Schedule: This Notice of Intent is the first phase of the EIS process and announces the 30-day public comment period to identify community concerns and local issues that should be addressed in the EIS. The next phase occurs when a Notice of Availability (NOA) is published in the **Federal Register** and local media to publicly announce the release of the Draft EIS in Summer 2014. A 45-day public comment period for the Draft EIS will commence upon publication of the NOA in the **Federal Register**. The USMC will consider and respond to all comments

The Department of the Navy, U.S. Marine Corps, announces its intent to prepare an Environmental Impact Statement (EIS) to address the potential environmental consequences that may result from implementation of multiple projects in support of Marine Barracks Washington (MBW). The proposed action is to implement various construction, renovation, and repair projects to address existing facilities deficiencies at MBW. Some of these projects are sufficiently ripe for detailed analysis under the National Environmental Policy Act (NEPA) and are the focus of the EIS analysis. The EIS will also provide a programmatic level of analysis of the potential effects of several additional projects for which information sufficient to conduct detailed NEPA analysis is not yet available. A range of action alternatives as well as the No-Action alternative are being evaluated in the EIS.

The Marine Corps **is holding a public scoping meeting** to help identify environmental issues and community concerns with respect to this proposal. There will be no formal presentations; but Marine Corps representatives will be available to answer questions and provide information about the proposed action at the meetings.

Concurrent with the NEPA process, the Marine Corps is also initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, the Marine Corps will hold a Section 106 meeting in a separate area where subject matter experts will explain the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

Please plan to attend **at your convenience anytime between 5:30 pm and 8:30 pm.** The open house meeting is being held on the following date, at the following location in Washington, D.C.:

Tuesday, September 24, 2013	**Tyler Elementary School** **1001 G Street, SE**

Please visit our website where information regarding the proposal is available for viewing and downloading at www.mbweis.com. All comments should be postmarked or submitted no later than October 7, 2013 to ensure their full consideration in the EIS analysis. Comments may be submitted electronically at our website or through the mail by sending it to:

MBW EIS Project Manager – William Sadlon
1314 Harwood Street, SE
Building 212
Washington Navy Yard, DC 20374-5018

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The Washington Post

CLASSIFIED

washingtonpost.com/classifieds — FRIDAY, SEPTEMBER 6, 2013

Official Notices

The Department of the Navy, U.S. Marine Corps, announces its intent to prepare an Environmental Impact Statement (EIS) to address the potential environmental consequences that may result from implementation of multiple projects in support of Marine Barracks Washington (MBW). The proposed action is to implement various construction, renovation, and repair projects to address existing facilities deficiencies at MBW. Some of these projects are sufficiently ripe for detailed analysis under the National Environmental Policy Act (NEPA) and are the focus of the EIS analysis. The EIS will also provide a programmatic level of analysis of the potential effects of several additional projects for which information sufficient to conduct detailed NEPA analysis is not yet available. A range of action alternatives as well as the No-Action alternative are being evaluated in the EIS.

The Marine Corps **is holding a public scoping meeting** to help identify environmental issues and community concerns with respect to this proposal. There will be no formal presentations; but Marine Corps representatives will be available to answer questions and provide information about the proposed action at the meetings.

Concurrent with the NEPA process, the Marine Corps is also initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, the Marine Corps will hold a Section 106 meeting in a separate area where subject matter experts will explain the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

Please plan to attend **at your convenience anytime between 5:30 pm and 8:30 pm.** The open house meeting is being held on the following date, at the following location in Washington, D.C.:

Tuesday, September 24, 2013	**Tyler Elementary School** **1001 G Street, SE**

Please visit our website where information regarding the proposal is available for viewing and downloading at www.mbweis.com. All comments should be postmarked or submitted no later than October 7, 2013 to ensure their full consideration in the EIS analysis. Comments may be submitted electronically at our website or through the mail by sending it to:

MBW EIS Project Manager – William Sadlon
1314 Harwood Street, SE
Building 212
Washington Navy Yard, DC 20374-5018

SEPTEMBER 20, 2013 59

BIZLEADS

Marketplace

The Department of the Navy, U.S. Marine Corps, announces its intent to prepare an Environmental Impact Statement (EIS) to address the potential environmental [illegible] that may result from implementation of [illegible] projects in support of Marine Barracks Washington (MBW). The proposed [illegible] construction, renovation, and repair projects to address existing facilities deficiencies at MBW. Some of these projects are sufficiently [illegible] detailed analysis [illegible] National Environmental Policy Act (NEPA) and are the focus of the EIS analysis. The EIS will also provide a programmatic level of analysis of the potential effects of several additional projects for which information sufficient to conduct detailed NEPA analysis is not yet available. A range of action alternatives as well as the No-Action alternative are being evaluated in the EIS.

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[illegible] with the NEPA process, the Marine Corps is conducting National Historic Preservation Act Section 106 consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, the Marine Corps will hold a Section 106 meeting in a separate area where subject matter experts will explain the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

Please plan to attend at your convenience anytime between 5:30 pm and 8:30 pm. The open house meeting is being held on the following date at the following location in Washington, D.C.:

Tuesday, September 24, 2013 Tyler Elementary School, 1001 G Street, SE

Please visit our website where information regarding the proposal is available for viewing and downloading at [illegible]. All comments should be postmarked or submitted no later than October 7, 2013 to ensure their full consideration in the EIS analysis. Comments may be submitted electronically at our website or through the mail by sending it to:

MBW EIS Project Manager – William Sadlon
1314 Harwood Street, SE
Building 212
Washington Navy Yard, DC 20374-5018

BIZLEADS

Marketplace

The Department of the Navy, U.S. Marine Corps, announces its intent to prepare an Environmental Impact Statement (EIS) to assess the potential environmental consequences that may result from implementation of multiple projects in support of Marine Barracks Washington (MBW). The proposed action is to implement various construction, renovation, and repair projects to address existing facilities deficiencies at MBW. Some of these projects are sufficiently ripe for detailed analysis under the National Environmental Policy Act (NEPA) and are the focus of the EIS analysis. The EIS will also provide a programmatic level of analysis of the potential effects of several additional projects for which information sufficient to conduct detailed NEPA analysis is not yet available. A range of action alternatives as well as the No-Action alternative are being evaluated in the EIS.

The Marine Corps is holding a public scoping meeting to help identify environmental issues and community concerns with respect to this proposal. There will be no formal presentations, but Marine Corps representatives will be available to answer questions and provide information about the proposed action at the meetings.

Concurrent with the NEPA process, the Marine Corps is also initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, the Marine Corps will hold a Section 106 meeting in a separate area where subject matter experts will explain the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

Please plan to attend at your convenience anytime **between 5:30 pm and 8:30 pm**. The open house meeting is being held on the following date, at the following location in Washington, D.C.:

Tuesday September 24, 2013 Tyler Elementary School, 1001 G Street SE

Please visit our website where information regarding the proposal is available for viewing and downloading at www.mbweis.com. All comments should be postmarked or submitted no later than October 7, 2013 to ensure their full consideration in the EIS analysis. Comments may be submitted electronically at our website or through the mail by sending it to:

MBW EIS Project Manager – William Sadlon
1314 Harwood Street, SE
Building 212
Washington Navy Yard DC 20374-5018

Attachment B: General Scoping Letter

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Southeast Public Library
Public Documents
403 7th St. S.E.
Washington, DC 20003

Dear Sir or Madam,

The Department of the Navy, U.S. Marine Corps, is in the initial stages of preparing an EIS to evaluate the potential environmental impacts that could result from implementation of multiple projects in support of MBW in southeast Washington, D.C. This analysis is being conducted in accordance with the National Environmental Policy Act of 1969 (NEPA). We would like to inform you about both the proposed action and an upcoming public scoping meeting. Scoping is an early and open public involvement process aimed at determining the scope of issues to be addressed and identifying the significant issues related to a proposed action. An open-house-style public scoping meeting is scheduled for September 24, 2013 at Tyler Elementary School Auditorium, 1001 G Street SE, Washington, DC, from 5:30 pm to 8:30 pm. Agencies are invited to attend prior to the general public, beginning at 4:30 pm.

Concurrent with the NEPA process, the Marine Corps is initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, one designated area of the room will focus on the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

The proposed action is to implement several construction, renovation, and improvement projects scheduled for completion in the next 5 years to address existing and anticipated facilities deficiencies at MBW. The EIS will also provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available.

The principal project to be analyzed in detail is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in MBW's Building 20. This project was the focus of a pre-NEPA agency and public engagement process referred to as the Community Integrated Master Plan (CIMP) process. Other projects to be analyzed in detail include interior renovations to Buildings 7 and 8 at the MBW Main Post; improvements to the MBW Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation that would blend MBW facilities with the neighborhood. At this time, it is anticipated the EIS would evaluate four action alternatives for the BEQ Complex replacement project, comprising four identified sites near MBW, as well

Subj: ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR MULTIPLE PROJECTS IN SUPPORT OF MARINE BARRACKS WASHINGTON (MBW)

as the No Action Alternative. The attached enclosure depicts the location of the existing MBW properties and potential BEQ Complex alternative sites. Other longer-term (2018 or later) projects to be analyzed programmatically include Building 20 reuse and interior renovations to Building 9 to accommodate relocation of functions from the Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once these projects become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

In preparing the EIS for this proposal, the Marine Corps will analyze a broad range of resources and issues, including those raised during scoping. Anticipated issues associated with the proposed action may include, but are not limited to, socioeconomics, land use, cultural resources, transportation and traffic, and environmental justice.

The 30-day public scoping process began with the publication of the Notice of Intent to prepare this EIS in the *Federal Register* on September 6, 2013 and is scheduled to conclude on October 7, 2013. Please provide your comments by October 7, 2013 to ensure their consideration in the EIS analysis. You can submit your comments at the scoping meeting, via the project website at www.mbweis.com, or by mail to the MBW EIS Project Manager: Mr. Bill Sadlon, at william.sadlon@navy.mil, (202) 685-0164, or 1314 Harwood St. SE, Bldg. 212, Washington Navy Yard, DC 20374-5018.

Please submit requests for special assistance, sign language interpretation for the hearing impaired, oral comments, or other auxiliary aids needed at the scoping meeting to the MBW Public Affairs Officer, Captain Jack Norton, at (202) 433-6682 by September 13, 2013. If you have questions, or need further information, please contact the MBW EIS Project Manager or visit the project website at www.mbweis.com.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

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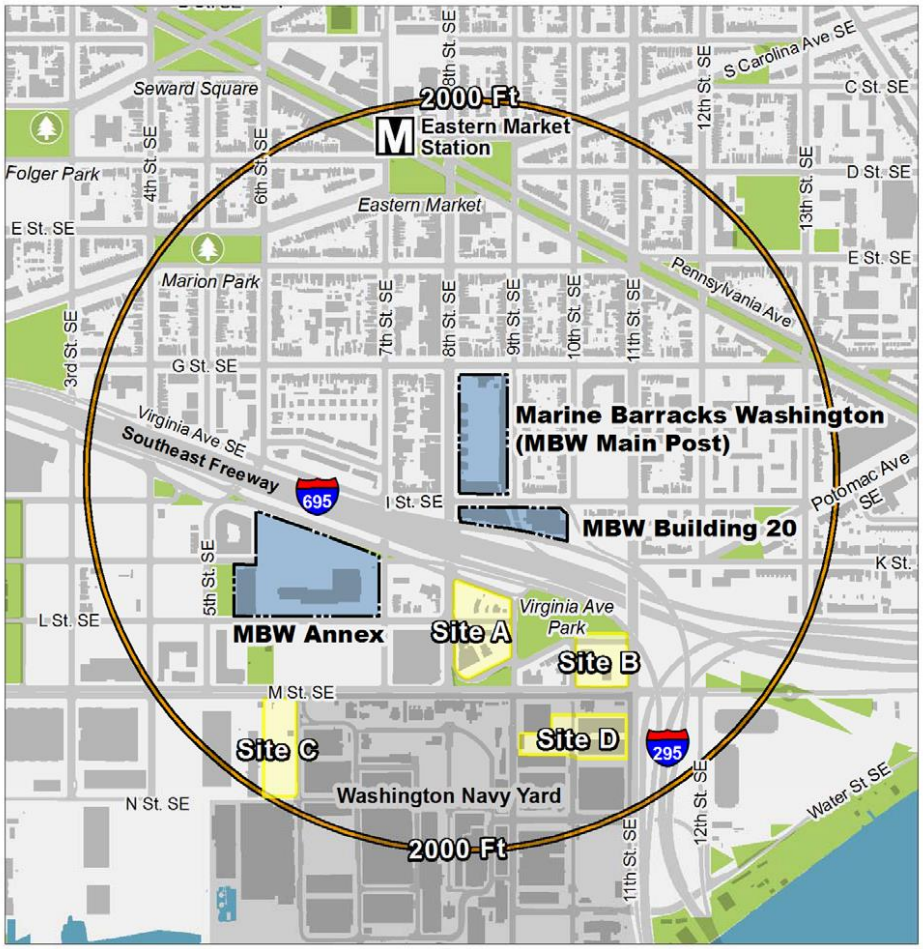

MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- 2000 Ft Buffer from MBW Main Post
- Buildings
- Roads
- Parks
- WaterPly

3

Attachment C: Email Notifications During Scoping

From: MBW EIS
Sent: Monday, September 30, 2013 5:21 PM
Subject: Marine Barracks Washington Environmental Impact Statement Scoping

The U.S. Marine Corps would like to thank those of you who attended the September 24, 2013 scoping meeting for the Environmental Impact Statement (EIS) for Multiple Projects in Support of Marine Barracks Washington, D.C. In response to comments received to date regarding improving the notification process, the project team has generated this additional email notification process. Those receiving this email have been identified as potential stakeholders in the EIS scoping process and/or from the pre-NEPA, Community Integrated Master Plan (CIMP) phase of the project.

This email is to serve as a reminder that the official EIS scoping comment period is scheduled to close on October 7, 2013. If the federal government is subject to a partial shutdown, the comment period will be extended automatically by the number of days that the government is shut down. Comments received during the scoping process will be used to inform the development of the EIS analysis going forward. Note that the Marine Corps will continue to accept and consider agency and public scoping input to the maximum extent possible prior to publication of the Draft EIS. The public will then have an opportunity to review and provide comments on the Draft EIS. Comments can be provided electronically via the project website (www.mbweis.com) or by mailing them to:

William Sadlon
MBW EIS Project Manager
1314 Harwood St SE
Building 212
Washington Navy Yard, D.C. 20374-5018

Additional information on the EIS can be found at the project website listed above. Copies of the display boards used during the September 24, 2013 scoping meeting can be found at the following link:
http://www.mbweis.com/Resources/Documents/Marine_Barracks_Washington_EIS_Posters_small_size_lo-res.pdf

For further information, please contact Captain Jack Norton, the MBW Public Affairs Office Representative at (202) 433-6682.

This is an automated message, please do not reply. Comments may be submitted via the project website: www.mbweis.com.

From: MBW EIS
Sent: Thursday, October 10, 2013 4:23 PM
Subject: Marine Barracks Washington Environmental Impact Statement Scoping Update

The U.S. Marine Corps would like to inform you that, due to the partial federal government shutdown, the official scoping comment period for the Environmental Impact Statement (EIS) for Multiple Projects at Marine Barracks Washington has been extended beyond the original closing date of October 7, 2013. The Marine Corps will not establish a new closing date for the scoping comment period until the partial government shutdown is ended. However, the Marine Corps anticipates that the comment period will remain open for approximately one week following the end of the shutdown. Once the shutdown ends, you will receive an email notifying you of the revised scoping comment period closing date. Comments can be provided electronically via the project website (www.mbweis.com) or by mailing them to:

William Sadlon
MBW EIS Project Manager
1314 Harwood St SE
Building 212
Washington Navy Yard, D.C. 20374-5018

Comments received during the scoping process will be used to inform the development of the EIS analysis going forward. Note that the Marine Corps will continue to accept and consider agency and public scoping input to the maximum extent possible prior to publication of the Draft EIS, which is anticipated in summer 2014. The public will then have an opportunity to review and provide comments on the Draft EIS.

Additional information on the EIS and the latest updates on the process can be found at the project website listed above. Copies of the display boards used during the September 24, 2013 scoping meeting can be found at the following link:
http://www.mbweis.com/Resources/Documents/Marine_Barracks_Washington_EIS_Posters_small_size_lo-res.pdf

For further information, please contact Captain Jack Norton, the MBW Public Affairs Office Representative at (202) 433-6682.

This is an automated message, please do not reply.

From: MBW EIS
Sent: Thursday, October 17, 2013 11:47 AM
Subject: New Closing Date for MBW EIS Scoping: Oct. 25, 2013

As indicated in our prior notification on October 10, 2013, due to the partial federal government shutdown the official scoping comment period for the Environmental Impact Statement (EIS) for Multiple Projects at Marine Barracks Washington was extended beyond the original closing date of October 7, 2013. Now that action has been taken to bring an end to the shutdown, the Marine Corps would like to announce that the new closing date for the scoping period will be Friday, October 25, 2013. This new closing date corresponds with previous announcements made noting that the comment period would remain open for approximately one week following the end of the shutdown. Comments can be provided electronically via the project website (www.mbweis.com) or by mailing them to:

William Sadlon
MBW EIS Project Manager
1314 Harwood St SE
Building 212
Washington Navy Yard, D.C. 20374-5018

Comments received during the scoping process will be used to inform the development of the EIS analysis going forward. Note that the Marine Corps will continue to accept and consider agency and public scoping input to the maximum extent possible prior to publication of the Draft EIS, which is anticipated in summer 2014. The public will then have an opportunity to review and provide comments on the Draft EIS.

Additional information on the EIS and the latest updates on the process can be found at the project website listed above. Copies of the display boards used during the September 24, 2013 scoping meeting can be found at the following link:
http://www.mbweis.com/Resources/Documents/Marine_Barracks_Washington_EIS_Posters_small_size_lo-res.pdf

For further information, please contact Captain Jack Norton, the MBW Public Affairs Office Representative at (202) 433-6682.

This is an automated message, please do not reply.

From: MBW EIS
Sent: Monday, October 28, 2013 10:52 AM
Subject: Close of the MBW EIS Scoping Period

This announcement serves as a notification that the official scoping comment period for the Environmental Impact Statement (EIS) for Multiple Projects at Marine Barracks Washington (MBW) has closed. As indicated previously, the comment period was extended beyond the original closing date of October 7, 2013 to Friday, October 25, 2013 due to the recent partial government shutdown.

The Marine Corps would like to thank all of you who participated in the scoping process! Comments received during the scoping process will be used to inform the development of the EIS analysis going forward. Publication of Draft EIS is anticipated in summer 2014. The public will then have an opportunity to review and provide comments on the Draft EIS.

Please note that while the comment period has officially closed, the Marine Corps will continue to accept and consider agency and public scoping input to the maximum extent possible as the Draft EIS is prepared. Accordingly, comments can still be provided electronically via the project website (http://www.mbweis.com/Comments.aspx) or by mailing them to:

William Sadlon
MBW EIS Project Manager
1314 Harwood St SE
Building 212
Washington Navy Yard, D.C. 20374-5018

Additional information on the EIS and the latest updates on the process can be found at the project website, www.mbweis.com.

For further information, please contact Captain Jack Norton, the MBW Public Affairs Office Representative at (202) 433-6682.

This is an automated message, please do not reply.

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Attachment D: Scoping Meeting Factsheets

Environmental Impact Statement

for Multiple Projects in Support of Marine Barracks Washington, DC

Scoping Meeting

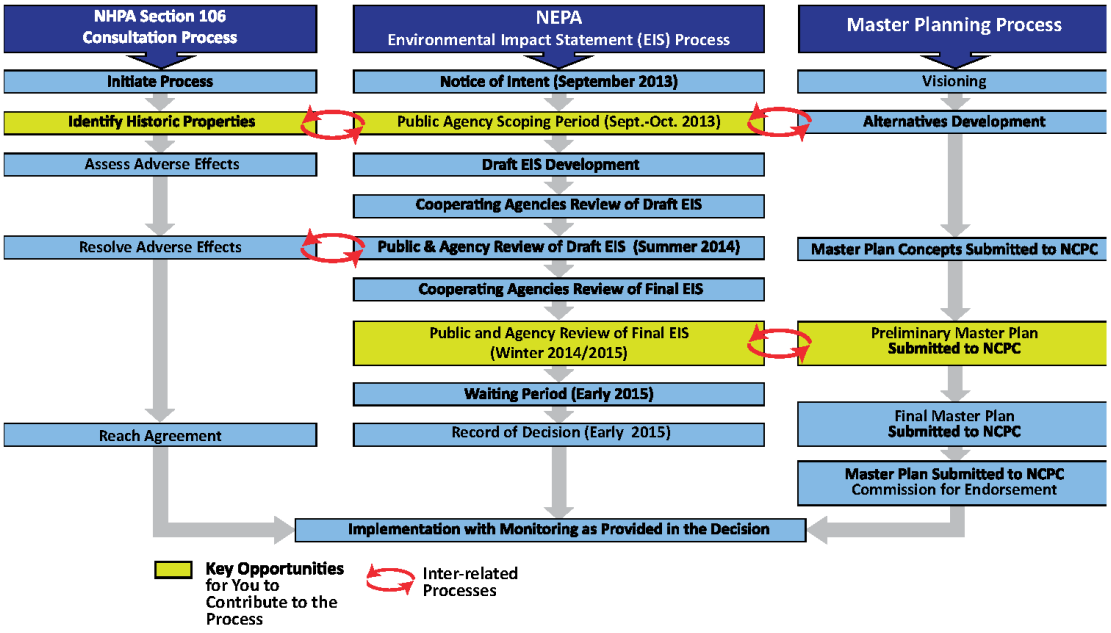
Your involvement assists the Marine Corps in making an informed decision.
Thank you for your participation.

September 2013

For more information, please visit the project website at: www.mbweis.com

EIS for Multiple Projects in Support of
Marine Barracks Washington, DC

Planning Process Overview



The **National Environmental Policy Act (NEPA)** guides the Marine Corps' environmental analysis process.

The **National Historic Preservation Act (NHPA)** requires federal agencies to consider the effects of their actions on historic properties.

The **National Capital Planning Act** establishes the National Capital Planning Commission (NCPC) as the central planning agency for the federal government in the National Capital Region.

These inter-related processes will take place concurrently.

For more information, please visit the project website at: www.mbweis.com

Scoping Meeting September 2013

EIS for Multiple Projects in Support of
Marine Barracks Washington, DC

Environmental Impact Statement | Purpose and Need




Marine Barracks Washington (MBW) Mission

Special Security and Ceremonial Duties for the Nation's Capital and the World

- Presidential Support Duties
- Ceremonial Marchers
- Silent Drill Platoon
- Body Bearers
- Color Guard
- Drum and Bugle Corps
- U.S. Marine Band

Marine Corps Institute

- Education and training of Marines worldwide
- Support for local Marine Barracks Washington DC mission events

Environmental Impact Statement Purpose & Need

*The **purpose** of the proposed action is to address existing and anticipated facility deficiencies at MBW.*

*The proposed action is **needed** to better support the functions and mission of MBW.*

Proposed projects are needed to address shortfalls in:

- Adequate Space for Mission and Support Functions
- Space Configuration
- Quality of Life
- Life Safety
- Sustainability/Energy Efficiency
- Anti-Terrorism and Force Protection (AT/FP)

For more information, please visit the project website at: www.mbweis.com

Scoping Meeting September 2013

EIS for Multiple Projects in Support of
Marine Barracks Washington, DC

Proposed Action and Alternatives

5-Year Outlook (Detailed Analysis)

MBW Main Post

- Building 7 and 8 interior renovations
- Improve efficiency and function
- Meet sustainability goals

MBW Annex

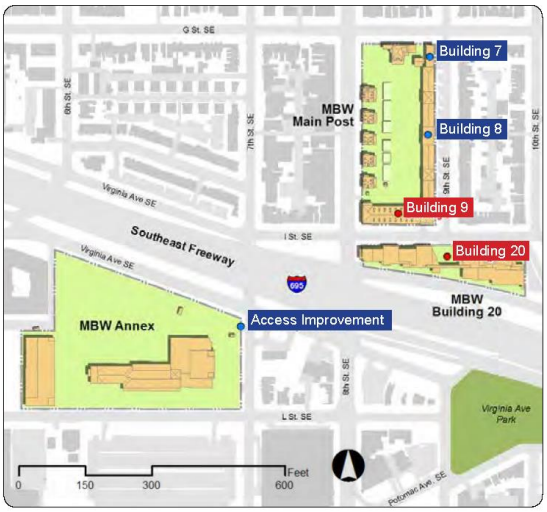
- Upgrade the existing access point at the corner of 7th and K Streets SE

New BEQ Complex

- Acquire land and construct replacement Bachelor Enlisted Quarters (BEQ) Complex
- 4 Alternative sites identified

Installation-wide

- Improvements to building facades, fencing, infrastructure, pedestrian amenities, and landscaping



Beyond 2018 ("Programmatic" Analysis)

Building 20 Reuse

- How will Building 20 site be used after it no longer serves as a BEQ Complex?

Other Projects

- Building 9 interior renovations
- Relocation of current functions/units
- Marine Corps Institute (currently a tenant at Washington Navy Yard)
- Additional landscaping and maintenance projects

For more information, please visit the project website at: www.mbweis.com

Scoping Meeting September 2013

EIS for Multiple Projects in Support of
Marine Barracks Washington, DC

Proposed Action and Alternatives | BEQ Complex Sites

Site Screening Criteria

Within a 10-minute walk from MBW Main Post

- Necessary for MBW mission/campus requirements

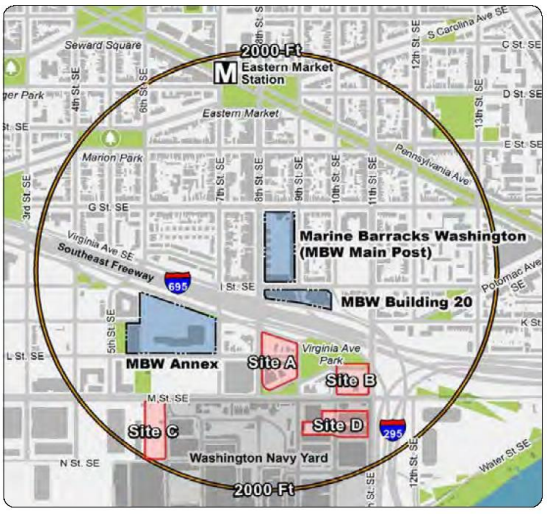
Must meet minimum developable area requirements:

- Area requirements include:
  - Appropriate AT/FP setback distances
  - Compliance with applicable laws governing height restrictions
- BEQ Complex Space Requirement is 191,405 SF (includes Supporting Facilities and Parking)

Must not be a site that currently provides or is planned to provide public services for DC residents

- Services include public housing, education, or public recreation services

Four Alternative Sites Identified Based on the Above Criteria (A, B, C, D)



Conceptual Massing Studies

5-Story BEQ Complex

8-Story BEQ Complex

9-Story BEQ Complex

For more information, please visit the project website at: www.mbweis.com

Scoping Meeting September 2013

EIS for Multiple Projects in Support of
Marine Barracks Washington, DC

Proposed Action and Alternatives | Proposed Sites

BEQ Complex Alternative Sites A, B, C, and D

Alternative Site A

- 3.0-acre privately-owned site
- Composed of Squares 929, 930 and L Street SE between 8th and 9th Streets SE
- Adjacent to Virginia Avenue Park
- Site identified from the Community Integrated Master Plan (CIMP) Process
- Maximum height of buildings
  - Height Act: 90 feet (measured from Virginia Ave)

Alternative Site B

- 1.8-acre privately-owned site
- Composed of Square 976 and a portion of L Street SE between 10th and 11th Streets SE
- Site identified from CIMP Process
- Maximum height of buildings
  - Height Act: 110 feet (measured from M Street SE)

Alternative Site C

- 2.1-acre federally-owned site
- Composed of Square 853 in the Southeast Federal Center just west of Washington Navy Yard
- Site identified after the CIMP Process concluded
- Maximum height of buildings
  - Height Act: 110 feet (measured from M Street SE)

Alternative Site D

- 2.2-acre U.S. Navy-owned site
- Composed of Squares 977 & 953 within Washington Navy Yard boundary
- Site identified from CIMP Process
- Maximum height of buildings
  - Height Act: 110 feet (measured from M Street SE)

For more information, please visit the project website at: www.mbweis.com

Scoping Meeting September 2013

EIS for Multiple Projects in Support of
Marine Barracks Washington, DC

Environmental Impact Analysis




Areas of Analysis The EIS will evaluate potential environmental impacts to resources such as:

- **Transportation**
  - Traffic
  - Transportation Management Planning
  - Parking
- **Socioeconomics**
  - Impacts to Businesses and Residences
  - Environmental Justice
  - Construction Impacts
  - Tax Impacts
- **Natural Resources**
  - Floodplains
  - Coastal Zone
  - Urban Landscaping
- **Air Quality**
  - Construction-related Emissions
- **Water Quality**
  - Stormwater Management
- **Cultural Resources**
  - Historic Structures
  - Historic Districts
  - National Historic Landmarks
  - Archaeological Sites
  - L'Enfant Plan
- **Land Use**
  - Neighborhood Character
  - Land Use Compatibility
  - Urban Landscaping
- **Public Services**
  - Infrastructure and Utilities
  - Recreation
- **Safety**
  - Hazardous Materials
  - Contaminated Sites
  - AT/FP Issues

For more information, please visit the project website at: www.mbweis.com

Scoping Meeting September 2013

EIS for Multiple Projects in Support of
Marine Barracks Washington, DC

What is the Community Integrated Master Plan (CIMP) Process?

COMMUNITY INTEGRATED
-MASTER PLAN-

CIMP

- First-of-its-kind, transparent process to evaluate community-military partnership opportunities
- An effective method for community-driven, consensus-based solutions

Consensus Building Efforts

- Community Leadership Group
- Workshops and Open House Public Meetings:
  - Open House
  - Workshop Series (4 workshops, February through May 2010)
  - CIMP Forum (2 sessions, November and December 2010)
  - More than 100 stakeholder meetings

Major Outcomes

- Identification of viable BEQ Complex sites
- Three of the alternative sites for this EIS
- Development of consensus community development objectives
- Identification of issues also to be addressed in the EIS:
  - Minimize/mitigate impacts to the tax base and public services to DC residents
  - Maximize public space within AT/FP standoffs
  - Strive to respect the L'Enfant Plan

For more information, please visit the project website at: www.mbweis.com

Scoping Meeting September 2013

EIS for Multiple Projects in Support of
Marine Barracks Washington, DC

NEPA Public Involvement Process

Your Participation

Your involvement and feedback are essential in helping the Marine Corps make an informed decision on the Proposed Action. You can be involved by:

- Participating in the Scoping Meeting
- Identifying community-specific issues and concerns related to the Proposed Action
- Ensuring you are on the mailing list to receive future information

Input received today and throughout the scoping comment period assists the Marine Corps in identifying key environmental issues associated with the Proposed Action.

Participate Today

You can provide your comments in the following ways:

1. Submit them here at the meeting
2. Electronically enter them at www.mbweis.com
3. Mail written comments to:

William Sadlon
MBW EIS Project Manager
1314 Harwood St SE
Building 212
Washington Navy Yard, D.C.
20374-5018

For further information, please contact the Public Affairs Office (PAO) Representative at:

Captain Jack Norton, MBW PAO
(202) 433-6682

Please provide your comments by October 7, 2013 to ensure their consideration in the EIS analysis.

Participate in the Future

Your future involvement opportunities include:

- Reading and commenting on the analyses presented in the Draft EIS
- Participating in the Public Meetings following Draft EIS publication
- Reviewing the Final EIS

Get on the mailing list and/or check the project website at www.mbweis.com for updates on the Draft and Final EISs.

Only through your involvement can the Marine Corps make an informed decision on the Proposed Action and alternatives.

For more information, please visit the project website at: www.mbweis.com

Scoping Meeting September 2013

EIS for Multiple Projects in Support of
Marine Barracks Washington, DC

National Historic Preservation Act (NHPA) and Section 106 Process

The Marine Corps requests your input on:

- The identification of historic properties in the erea of eotential effects (APE), and
- consideration of ways to avoid, minimize, and/or mitigate impacts.

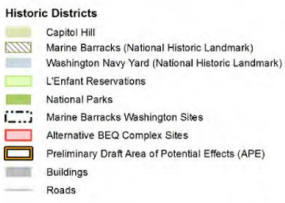
Potential Direct and Indirect Effects on Historic Properties from the Proposed Action include:

- Construction
- Ground disturbance
- Demolition
- Alteration
- Restricting access (such as road closures)
- Intrusive visual and audible elements

Types of Historic Properties Present in the APE

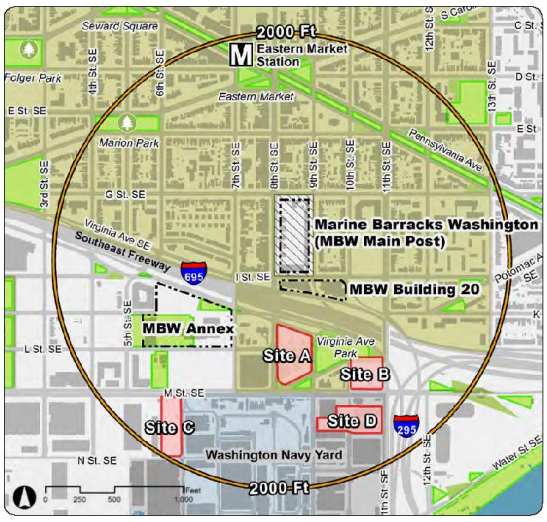
- Historic Districts
- Historic Structures
- L'Enfant Plan Historic Viewsheds and Reservations
- National Historic Landmarks
- Archaeological Sites

The NHPA requires federal agencies to consider the effects of their proposed actions on historic properties, which include archaeological sites, historic buildings and structures, districts, landscapes, and Traditional Cultural Properties that are eligible for listing in the National Register of Historic Places (NRHP).



Consultation Process

1) **Initiate the process**
   - Establish proposed project
   - Involve the public
   - Identify consulting parties
2) **Identify historic properties**
   - Establish the APE
   - Conduct surveys and studies as needed
   - Identify NRHP-eligible or listed sources
3) **Assess adverse effects**
   - Will historic properties be adversely affected?
4) **Resolve potential adverse effects**
   - Avoid, minimize, mitigate
   - Execute Agreement Document



For more information, please visit the project website at: www.mbweis.com

Scoping Meeting September 2013

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Attachment E: Draft EIS Distribution List

Elected Officials

Organization	Title	Address 1	Address 2	City, State, Zip
U.S. House of Representatives	Delegate Eleanor Holmes Norton	2136 Rayburn HOB		Washington, DC 20515
Delegate Eleanor Holmes Norton	Robert White, Legislative Assistant	2136 Rayburn HOB		Washington, DC 20515
DC Council		1350 Pennsylvania Avenue NW	Suite 307	Washington, DC 20004
DC Council, Ward 6	Councilman	1350 Pennsylvania Avenue, NW	Suite 402	Washington, DC 20004
DC Council, Ward 6	Linda O'Brien, Deputy Chief of Staff	1350 Pennsylvania Avenue, NW	Suite 408	Washington, DC 20004
DC Executive Office of the Mayor	Mayor Muriel Bowser	1350 Pennsylvania Avenue, NW	Suite 316	Washington, DC 20004
DC Executive Office of the Mayor	Community Relations and Services - Ward 6	1350 Pennsylvania Avenue, NW	Suite 211	Washington, DC 20004
Advisory Neighborhood Commissions 6B01	Commissioner Jennifer Samolyk	407 2nd Street SE		Washington, DC 20003
Advisory Neighborhood Commissions 6B02	Commissioner Diane Hoskins	649 C Street SE		Washington, DC 20003
Advisory Neighborhood Commissions 6B03	Commissioner James Loots	634 G Street SE		Washington, DC 20003
Advisory Neighborhood Commissions 6B04	Commissioner Kirsten Oldenburg	423 12th Street SE		Washington, DC 20003
Advisory Neighborhood Commissions 6B05	Commissioner Steve Hagedorn	246 9th Street SE		Washington, DC 20003

Elected Officials

Organization	Title	Address 1	Address 2	City, State, Zip
Advisory Neighborhood Commissions 6B06	Commissioner Nick Burger	1336 E Street SE		Washington, DC 20003
Advisory Neighborhood Commissions 6B07	Commissioner Daniel Chao	1329 K Street SE		Washington, DC 20003
Advisory Neighborhood Commissions 6B08	Commissioner Chandler Jayaraman	1436 Independence Avenue SE		Washington, DC 20003
Advisory Neighborhood Commissions 6B09	Commissioner Brian Flahaven	1628 Potomac Avenue SE		Washington, DC 20003
Advisory Neighborhood Commissions 6B10	Commissioner Denise Krepp	1837 A Street SE		Washington, DC 20003
Advisory Neighborhood Commissions 6D01	Commissioner Marjorie Lightman	605 4th Place SW		Washington, DC 20024
Advisory Neighborhood Commissions 6D02	Commissioner Stacy Cloyd	771 Delaware Ave SW		Washington, DC 20024
Advisory Neighborhood Commissions 6D03	Commissioner Rachel Reilly Carroll	800 4th Street SW		Washington, DC 20024
Advisory Neighborhood Commissions 6D04	Commissioner Andy Litsky	423 N Street SW		Washington, DC 20024
Advisory Neighborhood Commissions 6D05	Commissioner Roger Moffatt	1301 Delaware Avenue SW		Washington, DC 20024
Advisory Neighborhood Commissions 6D06	Commissioner Rhonda Hamilton	44 O Street SW		Washington, DC 20024
Advisory Neighborhood Commissions 6D07	Commissioner Meredith Fascett	1100 1st Street SE		Washington, DC 20024

Federal and DC Agencies

Organization	Title	Address 1	Address 2	City, State, Zip
National Capital Planning Commission	Marcel Acosta, Executive Director	401 9th Street, NW	North Lobby, Suite 500	Washington, DC 20004
National Capital Planning Commission	Federal Preservation Officer	401 9th Street, NW	North Lobby, Suite 500	Washington, DC 20004
U.S. Environmental Protection Agency - Office of Federal Activities	EIS Filing Section	Ariel Rios Building (South Oval Lobby)	1200 Pennsylvania Avenue, NW	Washington, DC 20460
U.S. Environmental Protection Agency - Region 3	NEPA Lead	1650 Arch Street		Philadelphia, PA 19103-2029
U.S. Commission of Fine Arts	Secretary	401 F Street NW	Suite 312	Washington, DC 20001-2728
U.S. Department of Transportation	Director	Federal Highways Administration	1200 New Jersey Avenue, SE Room W80-318	Washington, DC 20590
National Park Service, National Capital Parks-East Headquarters	Robert Parker	1849 C Street NW		Washington, DC 20240
National Park Service	Jon Jarvis, Director	1849 C Street NW		Washington, DC 20240
National Park Service	Section 106 Compliance Officer	1849 C Street NW		Washington, DC 20240
National Park Service	Bob Vogel, Regional Director	1100 Ohio Drive SW		Washington, DC 20242
Architect of the Capitol	Stephen Ayers	SB-15 U.S. Capitol	U.S. Capitol Building	Washington, DC 20515
General Services Administration Region 11	Regional Administrator	301 7th Street, SW		Washington, DC 20407
DC Historic Preservation Office	Director	1100 4th Street, SW	Suite E650	Washington, DC 20024
DC Housing Authority	Adrianne Todman, Executive Director	1133 North Capitol Street NE	Suite 147	Washington, DC 20002
DC Department of Transportation	Leif A. Dormsjo, Director	55 M Street, SE	Suite 400	Washington, DC 20003
DC Office of Planning	Jennifer Steingasser, Deputy	1100 4th Street, SW	Suite E650	Washington, DC

Federal and DC Agencies

Organization	Title	Address 1	Address 2	City, State, Zip
	Director			20024
DC Office of Planning – Ward 6	Director	2000 14th Street, NW	4th Floor	Washington, DC 20009
DC Parks and Recreation	Keith A. Anderson, Director	1250 U Street NW		Washington, DC 20009
DC Public Schools	Superintendent	1200 First St, NE		Washington, DC 20002
DC Public Schools	Peggy O'Brien	825 N. Capitol St. NE	9th Floor	Washington, DC 20002
DC Office of the Deputy Mayor for Planning and Economic Development (DMPED)		1350 Pennsylvania Avenue NW	Suite 317	Washington, DC 20004
DC Fire and Emergency Medical Services Department	Edward R. Mills III, Chief	1923 Vermont Ave. NW	Suite 102	Washington, DC 20001
Advisory Council on Historic Preservation	John M. Fowler, Executive Director	1100 Pennsylvania Avenue NW	Suite 803	Washington, DC 20004
Department of Consumer and Regulatory Affairs	Melinda M. Bolling, Interim Director	1100 4th Street SW		Washington, DC 20024
District Department of the Environment	Tommy Wells, Director	1200 First Street NE		Washington, DC 20002
District Department of the Environment	Acting EIS Officer	1200 First Street NE		Washington, DC 20002

Organizations

Organization Name	Title	Address1	Address2	City, State, Zip
Eastern Market Metro Community Association	Mary Fraker	407 Seward Square SE		Washington, DC 20003
National Trust for Historic Preservation	President and CEO	1785 Massachusetts Ave, NW		Washington, DC 20036-2117
Anacostia Watershed Restoration Partnership		The George Washington House	4302 Baltimore Avenue	Bladensburg, MD 20710
Barracks Row Main Street		733 8th Street, SE	2nd Floor	Washington, DC 20003

Organizations

Organization Name	Title	Address1	Address2	City, State, Zip
Capitol Hill Business Improvement District	President	Union Station Parking Garage Bus Level	30 Massachusetts Ave. NE	Washington, DC 20002
Capitol Hill Chamber of Commerce (CHAMPS)	President	PO Box 15486		Washington, DC 20003
Capitol Hill Restoration Society	President	420 10th St. SE		Washington, DC 20003
Capitol Riverfront BID	Executive Director	1100 New Jersey Ave. SE	Suite 1010	Washington, DC 20003
Stanton Development		305 7th St. SE		Washington, DC 20003
Carrollsburg Resident Council		307 T St NE		Washington, DC 20002

Individuals	
Michael Blackwell	John Manley
Paul Ghiotto	Daniel McCahan
Jennifer Hirsch	Winfield Sealander

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APPENDIX B

AGENCY COORDINATION

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Table of Contents

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UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Marcel Acosta, Executive Director
National Capital Planning Commission
401 9th Street, NW
North Lobby, Suite 500
Washington, DC 20004

Dear Mr. Acosta,

In accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Department of the Navy, United States Marine Corps, is preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental impacts that could result from the implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C. I invite the National Capital Planning Commission to actively participate with the Marine Corps as a federal cooperating agency in the preparation of analyses and documentation required by NEPA.

The proposed action is to implement several construction, renovation, and improvement projects scheduled for completion in the next 5 years to address existing and anticipated facilities deficiencies at MBW. The EIS will also provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available.

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In addition to soliciting your agency's interest in acting as a cooperating agency, the Marine Corps respectfully requests that your agency or you as an interested party identify any specific information,

Subject: COOPERATING AGENCY INVITIATION

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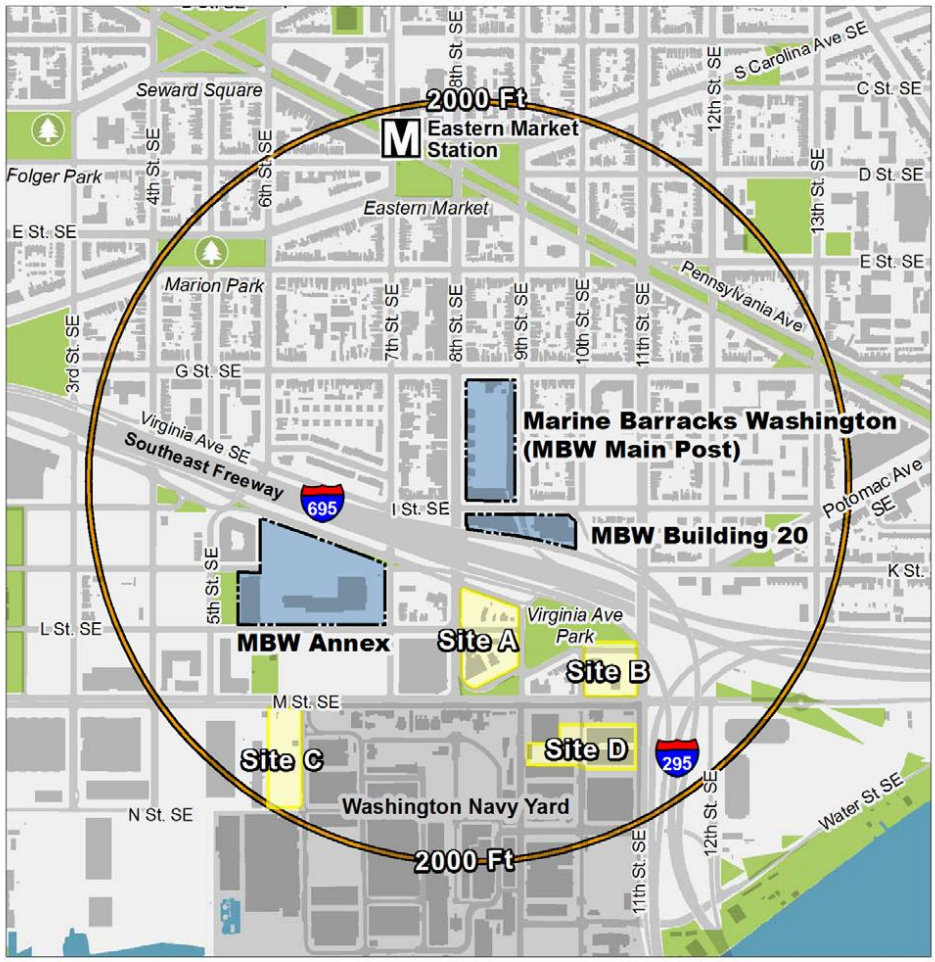
If the National Capital Planning Commission accepts this invitation to participate as a cooperating agency in the EIS, I would appreciate your office designating a point of contact to, among other things, work with the EIS team to disclose relevant information early in the analytical process, apply available technical expertise and staff support, avoid duplication of effort, and address intergovernmental issues. If we do not receive a response within 30 days of this letter it will be assumed that you are not interested in participating as a cooperating agency, but we will continue to include your agency on our project mailing list.

If you have any questions about the EIS, please contact the MBW EIS Project Manager, Mr. Bill Sadlon, at william.sadlon@navy.mil, (202) 685-0164, or 1314 Harwood St. SE, Bldg. 212, Washington Navy Yard, DC 20374-5018.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

2



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- 2000 Ft Buffer from MBW Main Post
- Buildings
- Roads
- Parks
- WaterPly

3

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Steve Whitesell, Regional Director
National Park Service
1100 Ohio Drive, SW
Washington D.C. 20242

Dear Mr. Whitesell,

In accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Department of the Navy, United States Marine Corps, is preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental impacts that could result from the implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C. I invite the National Park Service to actively participate with the Marine Corps as a federal cooperating agency in the preparation of analyses and documentation required by NEPA.

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Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

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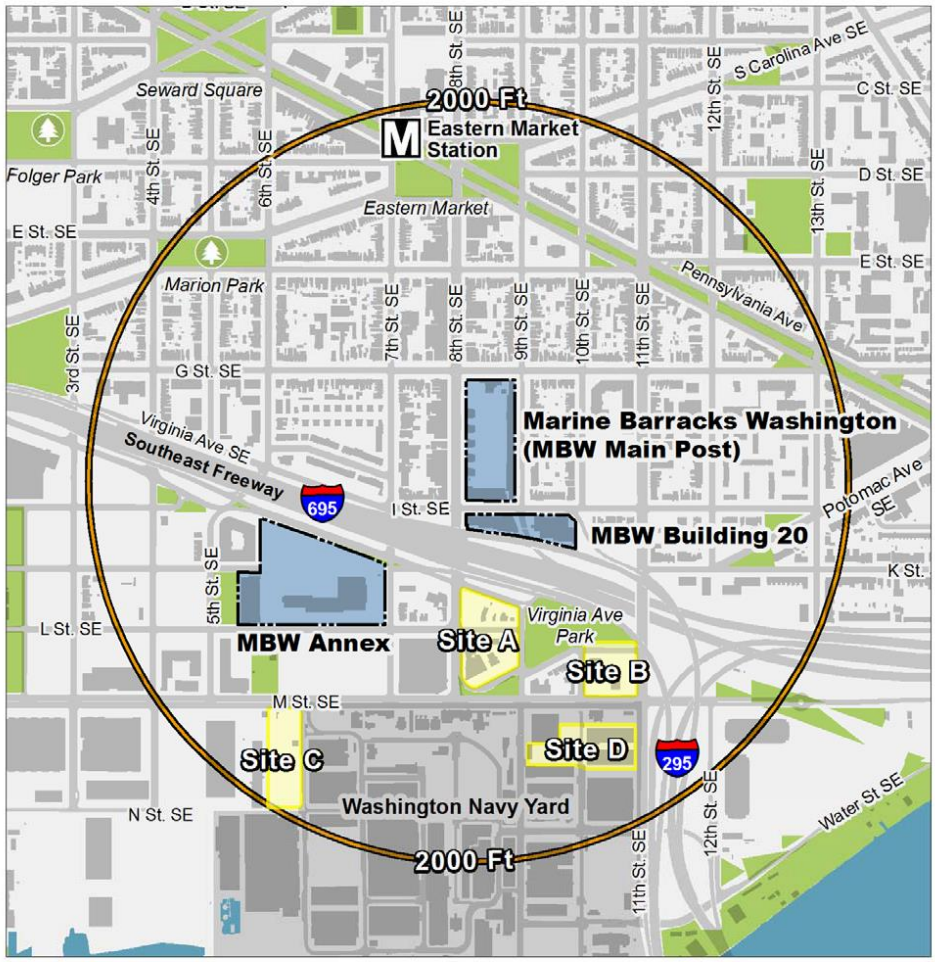

MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- 2000 Ft Buffer from MBW Main Post
- Buildings
- Roads
- Parks
- WaterPly

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Jesus Aguirre, Director
DC Parks and Recreation
1250 U Street, NW
Washington, DC 20009

Dear Mr. Aguirre,

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Subject: COOPERATING AGENCY INVITIATION

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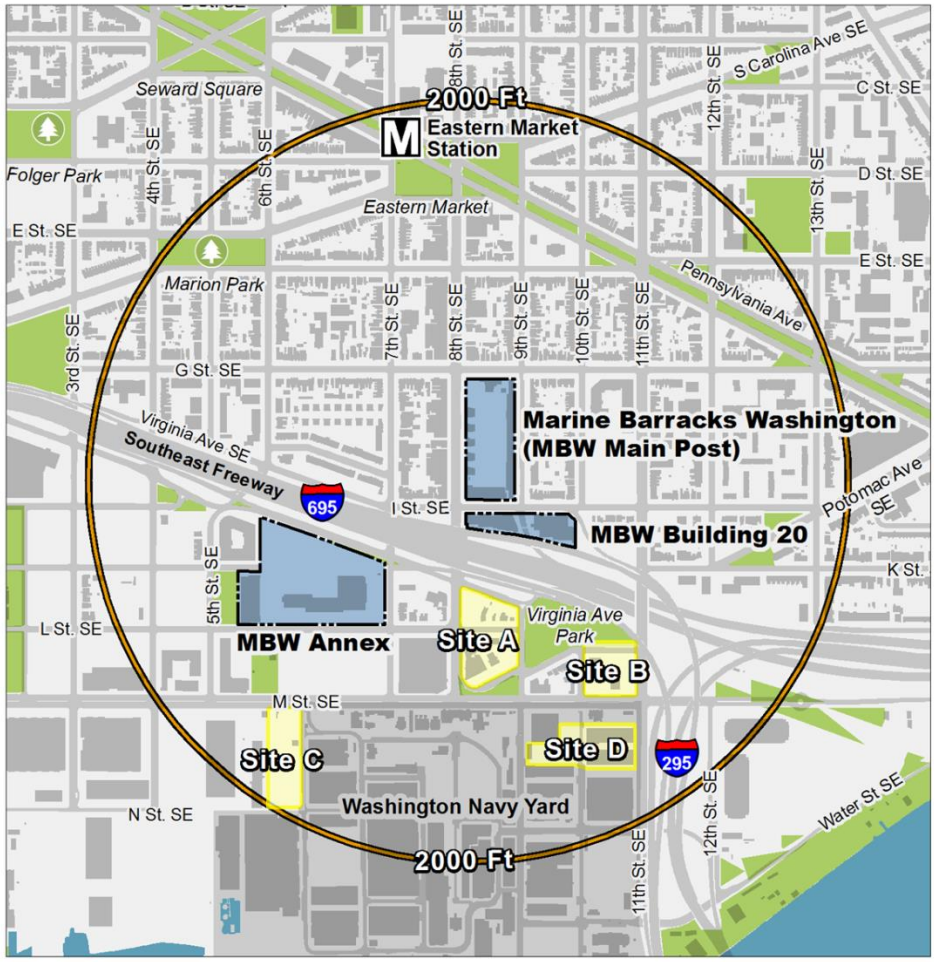
C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

2



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
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- Buildings
- Roads
- Parks
- WaterPly

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Harriet Tregoning, Director
Office of Planning
1100 4th Street, SW
Suite E650
Washington, DC 20024

Dear Ms. Tregoning,

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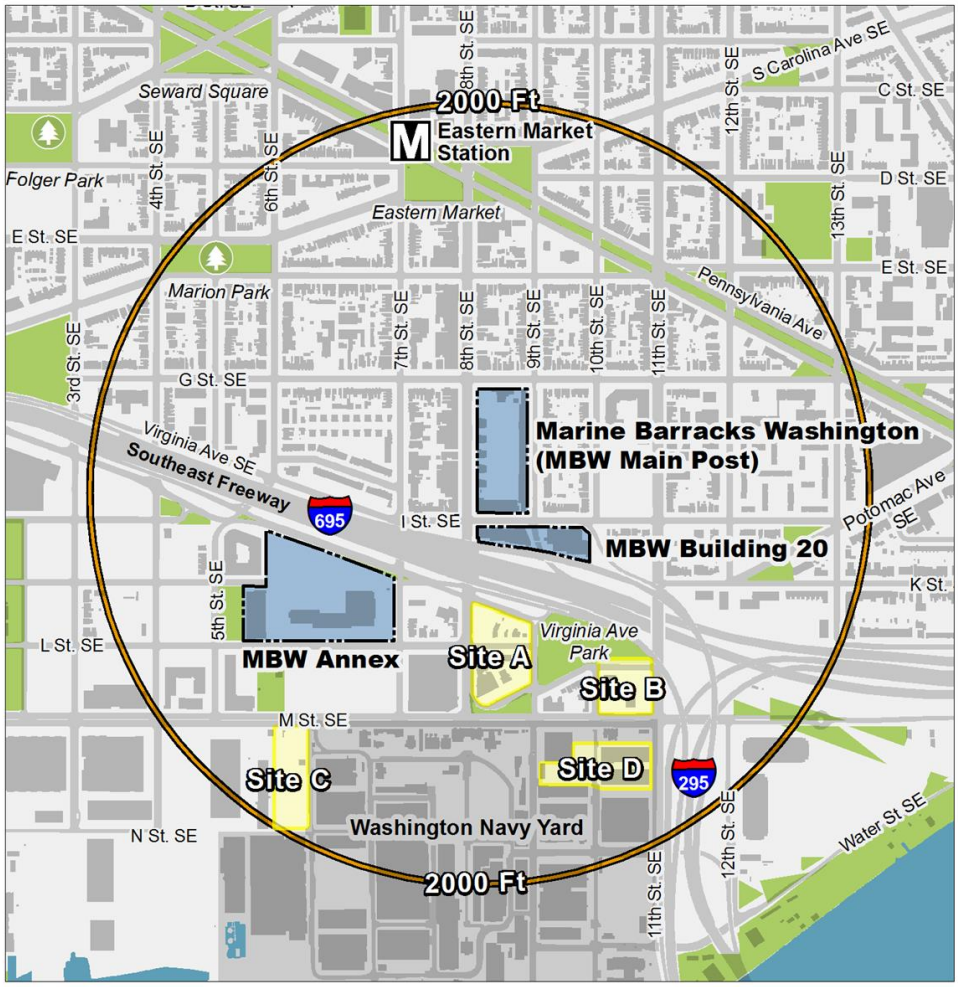
Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

2



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

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Source: DC GIS Data Clearinghouse/Catalog

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UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Nicholas Majett, Director
Department of Consumer and Regulatory Affairs
1100 4th Street SW
Washington, DC 20024

Dear Mr. Majett,

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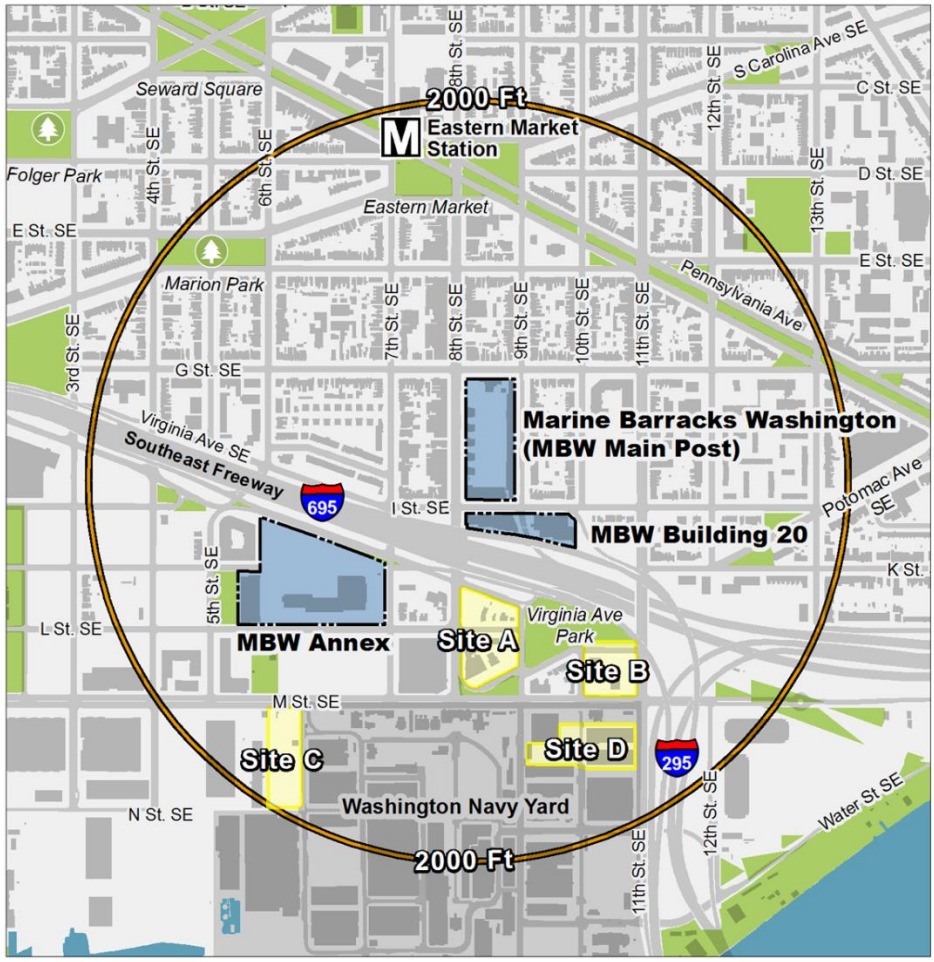
C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

2



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UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Terry Bellamy, Director
DC Department of Transportation
55 M Street, SE
Suite 400
Washington, DC 20003

Dear Mr. Bellamy,

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Subject: COOPERATING AGENCY INVITIATION

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Concurrent with the NEPA process, the Marine Corps is initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, one designated area of the room will focus on the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

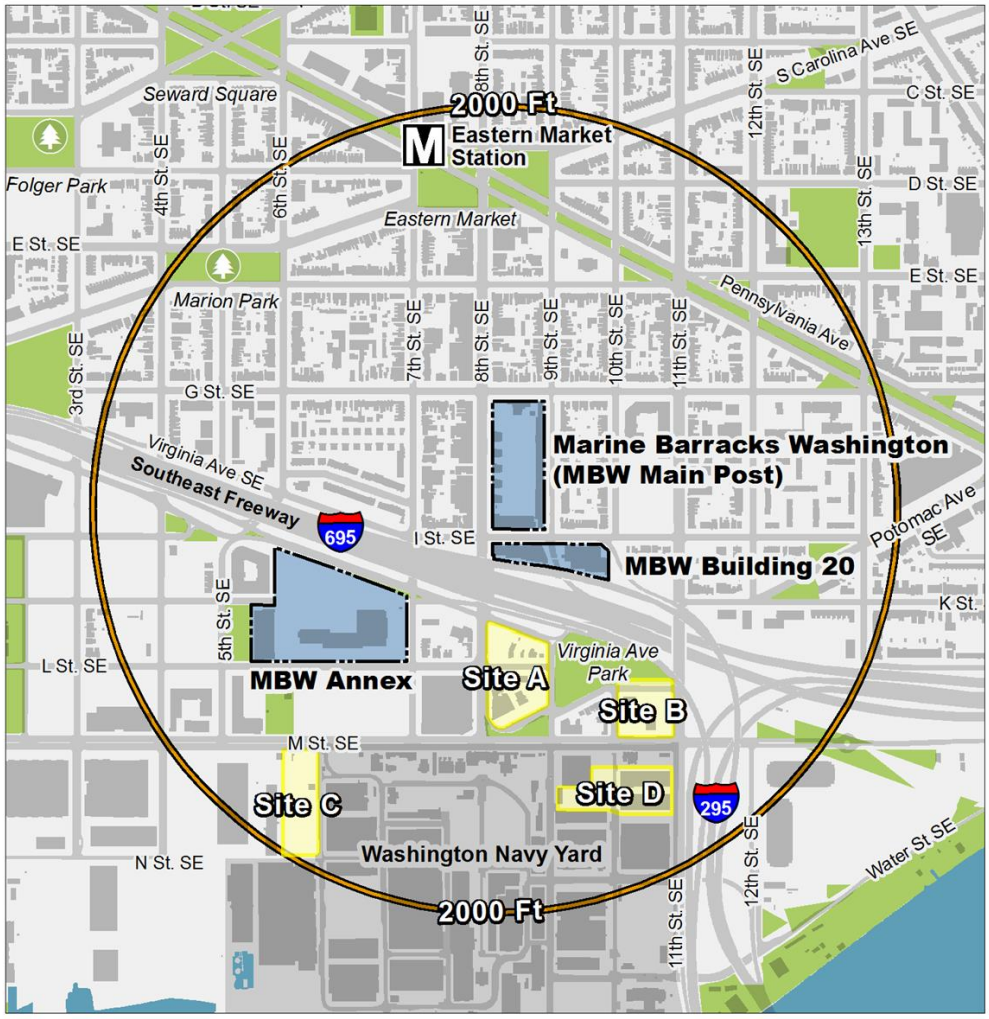
If the DC Department of Transportation accepts this invitation to participate as a cooperating agency in the EIS, I would appreciate your office designating a point of contact to, among other things, work with the EIS team to disclose relevant information early in the analytical process, apply available technical expertise and staff support, avoid duplication of effort, and address intergovernmental issues. If we do not receive a response within 30 days of this letter it will be assumed that you are not interested in participating as a cooperating agency, but we will continue to include your agency on our project mailing list.

If you have any questions about the EIS, please contact the MBW EIS Project Manager, Mr. Bill Sadlon, at william.sadlon@navy.mil, (202) 685-0164, or 1314 Harwood St. SE, Bldg. 212, Washington Navy Yard, DC 20374-5018.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

2



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- 2000 Ft Buffer from MBW Main Post
- Buildings
- Roads
- Parks
- WaterPly

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Keith A. Anderson, Director
District Department of the Environment
1200 First Street, NE
Washington, DC 20002

Dear Mr. Anderson,

In accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Department of the Navy, United States Marine Corps, is preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental impacts that could result from the implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C. I invite the District Department of the Environment to actively participate with the Marine Corps as a federal cooperating agency in the preparation of analyses and documentation required by NEPA.

The proposed action is to implement several construction, renovation, and improvement projects scheduled for completion in the next 5 years to address existing and anticipated facilities deficiencies at MBW. The EIS will also provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available.

The principal project to be analyzed in detail is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in MBW's Building 20. This project was the focus of a pre-NEPA agency and public engagement process referred to as the Community Integrated Master Plan (CIMP) process. Other projects to be analyzed in detail include interior renovations to Buildings 7 and 8 at the MBW Main Post; improvements to the MBW Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation that would blend MBW facilities with the neighborhood. At this time, it is anticipated the EIS would evaluate four action alternatives for the BEQ Complex replacement project at four identified sites near MBW, as well as the No Action Alternative. The attached enclosure depicts the location of the existing MBW properties and potential BEQ Complex alternative sites. Other longer-term (2018 or later) projects to be analyzed programmatically include Building 20 reuse and interior renovations to Building 9 to accommodate relocation of functions from the Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once these projects become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

In addition to soliciting your agency's interest in acting as a cooperating agency, the Marine Corps respectfully requests that your agency or you as an interested party identify any specific information,

Subject: COOPERATING AGENCY INVITIATION

issues, or concerns that should be included in the EIS during the scoping period. The public scoping process will begin with the publication of the Notice of Intent to prepare this EIS in the *Federal Register* on September 6, 2013 and is scheduled to conclude on October 7, 2013. For additional information, visit the project website at www.mbweis.com. An open-house-style public scoping meeting is scheduled for September 24, 2013 at Tyler Elementary School Auditorium, 1001 G Street SE, Washington, DC, from 5:30 pm to 8:30 pm. Agencies are invited to attend prior to the general public, beginning at 4:30 pm.

Concurrent with the NEPA process, the Marine Corps is initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, one designated area of the room will focus on the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

If the District Department of the Environment accepts this invitation to participate as a cooperating agency in the EIS, I would appreciate your office designating a point of contact to, among other things, work with the EIS team to disclose relevant information early in the analytical process, apply available technical expertise and staff support, avoid duplication of effort, and address intergovernmental issues. If we do not receive a response within 30 days of this letter it will be assumed that you are not interested in participating as a cooperating agency, but we will continue to include your agency on our project mailing list.

If you have any questions about the EIS, please contact the MBW EIS Project Manager, Mr. Bill Sadlon, at william.sadlon@navy.mil, (202) 685-0164, or 1314 Harwood St. SE, Bldg. 212, Washington Navy Yard, DC 20374-5018.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

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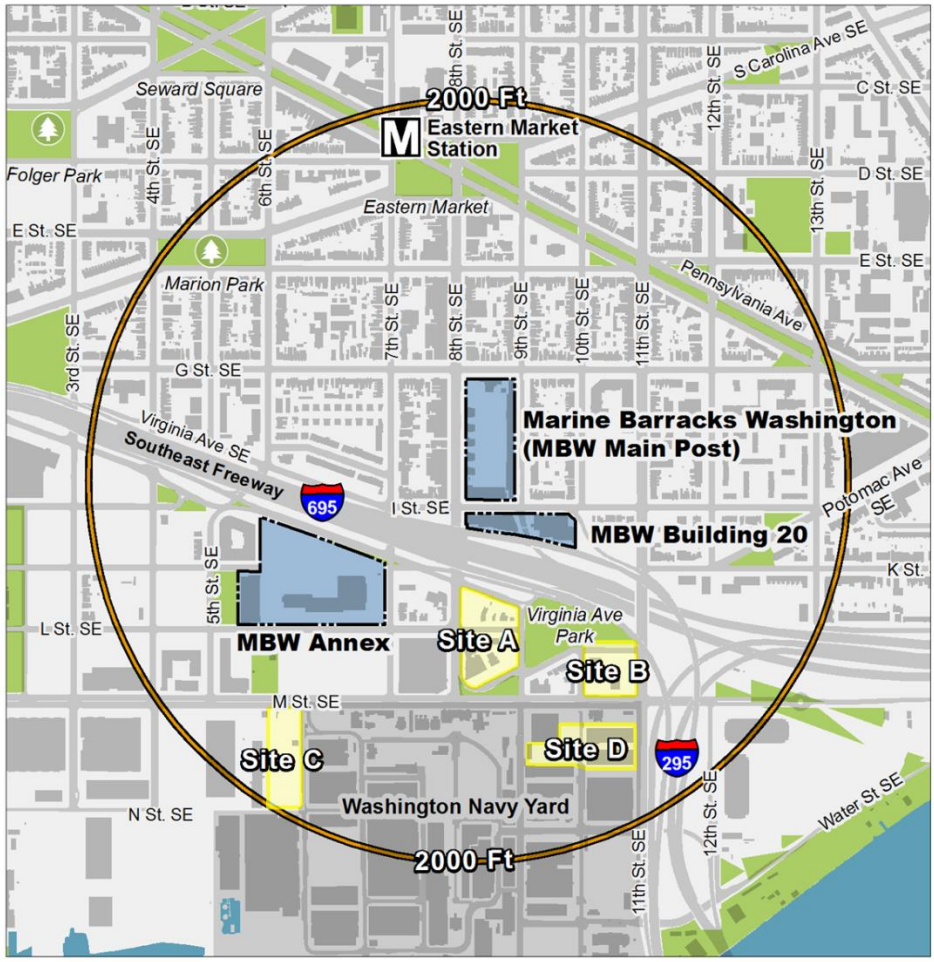

MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

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Source: DC GIS Data Clearinghouse/Catalog

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- Roads
- Parks
- WaterPly

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Kirsten Oldenburg
Advisory Neighborhood Commission 6B
921 Pennsylvania Avenue, SE
Suite 305
Washington, DC 20003

Dear Ms. Oldenburg,

In accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Department of the Navy, United States Marine Corps, is preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental impacts that could result from the implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C. I invite the Advisory Neighborhood Commission 6B to actively participate with the Marine Corps as a federal cooperating agency in the preparation of analyses and documentation required by NEPA.

The proposed action is to implement several construction, renovation, and improvement projects scheduled for completion in the next 5 years to address existing and anticipated facilities deficiencies at MBW. The EIS will also provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available.

The principal project to be analyzed in detail is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in MBW's Building 20. This project was the focus of a pre-NEPA agency and public engagement process referred to as the Community Integrated Master Plan (CIMP) process. Other projects to be analyzed in detail include interior renovations to Buildings 7 and 8 at the MBW Main Post; improvements to the MBW Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation that would blend MBW facilities with the neighborhood. At this time, it is anticipated the EIS would evaluate four action alternatives for the BEQ Complex replacement project at four identified sites near MBW, as well as the No Action Alternative. The attached enclosure depicts the location of the existing MBW properties and potential BEQ Complex alternative sites. Other longer-term (2018 or later) projects to be analyzed programmatically include Building 20 reuse and interior renovations to Building 9 to accommodate relocation of functions from the Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once these projects become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

In addition to soliciting your agency's interest in acting as a cooperating agency, the Marine Corps respectfully requests that your agency or you as an interested party identify any specific information,

Subject: COOPERATING AGENCY INVITIATION

issues, or concerns that should be included in the EIS during the scoping period. The public scoping process will begin with the publication of the Notice of Intent to prepare this EIS in the *Federal Register* on September 6, 2013 and is scheduled to conclude on October 7, 2013. For additional information, visit the project website at www.mbweis.com. An open-house-style public scoping meeting is scheduled for September 24, 2013 at Tyler Elementary School Auditorium, 1001 G Street SE, Washington, DC, from 5:30 pm to 8:30 pm. Agencies are invited to attend prior to the general public, beginning at 4:30 pm.

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If the Advisory Neighborhood Commission 6B accepts this invitation to participate as a cooperating agency in the EIS, I would appreciate your office designating a point of contact to, among other things, work with the EIS team to disclose relevant information early in the analytical process, apply available technical expertise and staff support, avoid duplication of effort, and address intergovernmental issues. If we do not receive a response within 30 days of this letter it will be assumed that you are not interested in participating as a cooperating agency, but we will continue to include your agency on our project mailing list.

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Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

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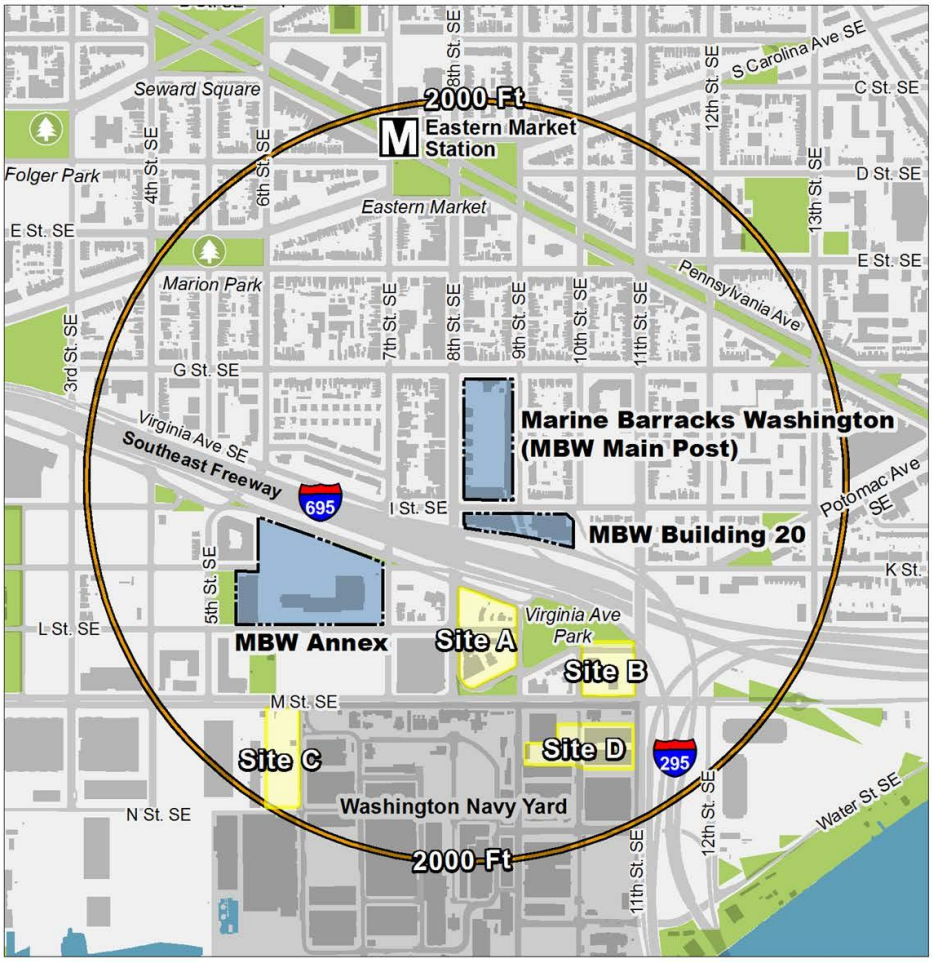

MBW Properties and Alternative BEQ Complex Sites

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Source: DC GIS Data Clearinghouse/Catalog

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- Alternative BEQ Complex Sites
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- Buildings
- Roads
- Parks
- WaterPly

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Advisory Neighborhood Commission 6D
1101 4th Street, SW, Suite W130
Washington, DC 20024

Dear Sir or Madam,

In accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Department of the Navy, United States Marine Corps, is preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental impacts that could result from the implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C. I invite the Advisory Neighborhood Commission 6D to actively participate with the Marine Corps as a federal cooperating agency in the preparation of analyses and documentation required by NEPA.

The proposed action is to implement several construction, renovation, and improvement projects scheduled for completion in the next 5 years to address existing and anticipated facilities deficiencies at MBW. The EIS will also provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available.

The principal project to be analyzed in detail is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in MBW's Building 20. This project was the focus of a pre-NEPA agency and public engagement process referred to as the Community Integrated Master Plan (CIMP) process. Other projects to be analyzed in detail include interior renovations to Buildings 7 and 8 at the MBW Main Post; improvements to the MBW Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation that would blend MBW facilities with the neighborhood. At this time, it is anticipated the EIS would evaluate four action alternatives for the BEQ Complex replacement project at four identified sites near MBW, as well as the No Action Alternative. The attached enclosure depicts the location of the existing MBW properties and potential BEQ Complex alternative sites. Other longer-term (2018 or later) projects to be analyzed programmatically include Building 20 reuse and interior renovations to Building 9 to accommodate relocation of functions from the Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once these projects become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

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Subject: COOPERATING AGENCY INVITIATION

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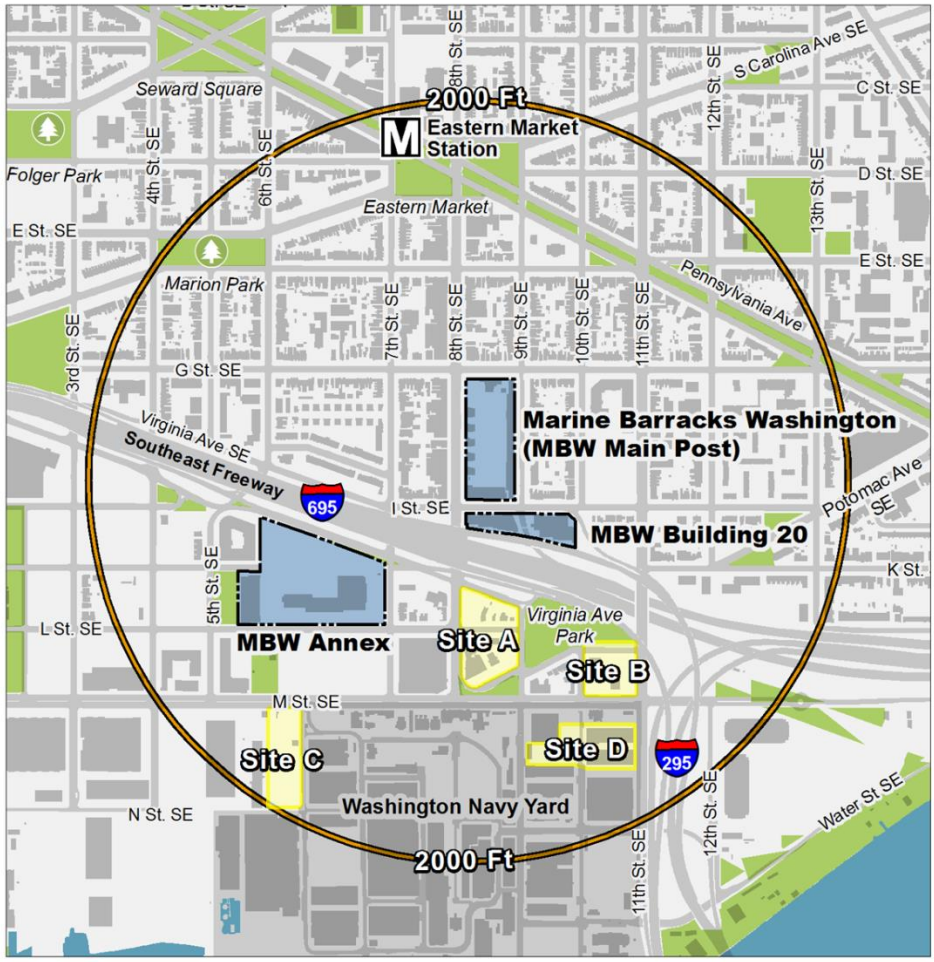
If the Advisory Neighborhood Commission 6B accepts this invitation to participate as a cooperating agency in the EIS, I would appreciate your office designating a point of contact to, among other things, work with the EIS team to disclose relevant information early in the analytical process, apply available technical expertise and staff support, avoid duplication of effort, and address intergovernmental issues. If we do not receive a response within 30 days of this letter it will be assumed that you are not interested in participating as a cooperating agency, but we will continue to include your agency on our project mailing list.

If you have any questions about the EIS, please contact the MBW EIS Project Manager, Mr. Bill Sadlon, at william.sadlon@navy.mil, (202) 685-0164, or 1314 Harwood St. SE, Bldg. 212, Washington Navy Yard, DC 20374-5018.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

2



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

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- Roads
- Parks
- WaterPly

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

National Capital Planning Commission
401 9th Street, NW
North Lobby, Suite 500
Washington, DC 20004

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR MULTIPLE PROJECTS IN SUPPORT OF MARINE BARRACKS WASHINGTON (MBW)

Dear Sir or Madam:

The Department of the Navy, U.S. Marine Corps, is in the initial stages of preparing an Environmental Impact Statement (EIS) to evaluate the potential impacts that could result from implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C.

The proposed action is to implement several construction, renovation, and repair projects scheduled for completion in the next 5 years to address existing and anticipated facilities deficiencies at MBW. The EIS will also provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed National Environmental Policy Act (NEPA) analysis is not yet available.

The principal project to be analyzed in detail is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. This project was the focus of a pre-NEPA agency and public engagement process referred to as the Community Integrated Master Plan (CIMP) process. Other projects to be analyzed in detail include interior renovations to Buildings 7 and 8 at the MBW Main Post; improvements to the MBW Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation that would blend MBW facilities with the neighborhood. At this time, it is anticipated the EIS would evaluate four action alternatives for the BEQ Complex project, as well as the No Action Alternative. The attached enclosures depict the locations of the existing MBW properties and potential BEQ Complex sites.

Other longer-term (2018 or later) projects to be analyzed programmatically involve reuse of Building 20 or the Building 20 site and interior renovations to Building 9 to accommodate relocation of functions from the Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once

these projects become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The potential environmental impacts of the proposed action will be analyzed in the EIS. In proceeding with the planning of this undertaking, we intend to coordinate our Section 106 National Historic Preservation Act (NHPA) consultation with the development of the EIS pursuant to 36 CFR 800.8, and use the EIS as our primary NHPA consultation documentation. Additionally, to fulfill our responsibilities under 36 CFR 800.3(e) and 800.4(a)(3), we will hold a Section 106 public meeting to solicit input from the public on potential effects on historic properties resulting from the proposed action. The public meeting will be held in conjunction with the EIS public scoping meeting on September 24, 2013 from 5:30 p.m. to 8:30 p.m., at Tyler Elementary School, located at 1001 G St SE, Washington, D.C. 20390. In addition to the public scoping meeting, the Marine Corps will hold an agency scoping meeting from 4:30 p.m. to 5:30 p.m., prior to the public scoping meeting. During that time, the Marine Corps will give a brief presentation of the Proposed Action and will be available for open discussion with agencies regarding issues and concerns.

Pursuant to 36 CFR 800.4(a)(1), the Marine Corps is consulting with the DC Historic Preservation Office to define the Area of Potential Effects (APE) for the proposed action. Once defined, pursuant to 36 CFR 800.4(a)(2), background research and cultural resource surveys will be initiated to identify historic properties within the APE. The results of these identification efforts, in addition to an assessment of the undertaking's effects on any historic properties within the APE, will be the subject of future consultation on this project as part of the Section 106 process.

The Marine Corps invites you to participate in the Section 106 consultation process. For this initial phase of consultation, the Marine Corps respectfully requests that you identify any concerns you may have regarding the Proposed Action and respond by October 7, 2013 so that we may address those concerns and incorporate them into the Draft EIS. In addition, please provide any comments you have regarding our efforts to identify all potential consulting parties and gather information, as outlined in 36 CFR 800.3(f) and 800.4(a)(4).

If you have any questions or need further information on the project, please contact Sherry Frear, the Section 106 consultation coordinator at Headquarters Marine Corps/Marine

Corps Installations Command, at sherry.frear@usmc.mil or (571) 256-2838. Thank you in advance for your input on this important project.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

Enclosures: 1. Notice of Intent to Prepare an EIS
2. Proposed Action and Alternatives Maps
3. Preliminary Draft APE for the Proposed Action

3

Enclosure 1.

Tacoma Convention Center, 1500 Broadway, Tacoma, Washington 98402 on Thursday, October 17, 2013, from 5:00 p.m. to 8:00 p.m.

In addition, an "online scoping meeting" will be continuously hosted on the EIS Internet Web site at *www.millenniumbulkeiswa.gov* for the duration of the scoping period.

b. Potentially significant issues to be analyzed in the EIS include, but are not limited to direct, indirect, and cumulative effects of the project-specific activities proposed within the NEPA scope of analysis as described above on navigation (e.g., vessel traffic and navigational safety); aquatic habitats; aquatic species, including Endangered Species Act-listed species and Washington State species of concern; Tribal treaty rights; wetland and riparian habitat; wildlife; vehicle traffic; cultural, historic, and archeological resources; air and water quality; noise; recreation; land use; and aesthetics.

c. The Corps will consult with the Washington State Historic Preservation Officer and applicable Tribes to comply with the National Historic Preservation Act; the U.S. Fish and Wildlife Service and National Marine Fisheries Service to comply with the Endangered Species Act; the National Marine Fisheries Service to comply with the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act; and applicable Tribes to comply with reserved treaty fishing rights.

d. Preparation of the draft EIS will begin after the close of the scoping period. The draft EIS is currently scheduled to be available for public review and comment by June 2015.

e. A 90-day public review period will be provided for interested parties to review and comment on the draft EIS. Interested parties are encouraged to contact the Corps if they wish to be notified when the draft EIS is issued.

f. All comments received will become part of the administrative record for this project and subject to public release to third-parties, including any personally identifiable information such as name, phone number, and address, included in the comment.

Dated: August 29, 2013.

Bruce A. Estok,

Colonel, Corps of Engineers, District Engineer.

[FR Doc. 2013–21780 Filed 9–5–13; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Intent To Prepare an Environmental Impact Statement for Multiple Projects in Support of the Marine Barracks Washington, District of Columbia

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: Pursuant to Section (102)(2)(c) of the National Environmental Policy Act (NEPA) of 1969, and regulations implemented by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] Parts 1500–1508). Department of the Navy (DoN) NEPA regulations (32 CFR Part 775), and United States Marine Corps (USMC) NEPA directives (Marine Corps Order P5090.2A, changes 1 and 2), the DoN intends to prepare an Environmental Impact Statement (EIS) for several proposed construction, repair, and renovation projects in support of the Marine Barracks Washington (MBW), District of Columbia (DC).

Dates and Addresses: The DoN, USMC, is initiating a 30-day public scoping process to identify community interests and local concerns to be addressed in the EIS, which starts with the publication of this Notice of Intent and ends on October 7, 2013. A public scoping meeting, using an informal open house format, will be held from 5:30 p.m. to 8:30 p.m. on September 24, 2013 at Tyler Elementary School, 1001 G St SE., Washington, DC 20390.

The public is invited to attend this meeting to view project-related displays, speak with USMC representatives, and submit verbal or written comments. All comments regarding the scope of issues that the USMC should consider during EIS preparation must be received prior to October 7, 2013 to be fully considered. Additional information concerning the meeting and the proposed alternatives is available on the EIS Web site at *www.mbweis.com* and will be announced in local and regional newspapers. Please submit requests for special assistance, sign language interpretation for the hearing impaired, or other auxiliary aids needed at the scoping meeting to the MBW Public Affairs Officer, Captain Jack Norton, at 202–433–6682 by September 13, 2013.

Concurrent with the NEPA process, the USMC is initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, one designated area of the room will focus on the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

Submitting Comments: Federal, state, and local agencies and members of the public are encouraged to provide oral and written comments regarding the scope of the EIS, reasonable alternatives, and specific issues or topics of interest. There are three ways comments can be submitted: (1) In person at the public scoping open house meeting, (2) using the project's public Web site comment form at *www.mbweis.com,* or (3) providing written comments through U.S. mail. All comments on the scope of the EIS or any specific concerns regarding potential impacts to the environment should be submitted or postmarked no later than October 1, 2013. Comments submitted by mail should be sent to: Mr. William Sadlon, MBW CIMP EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

The USMC will consider all comments received during the scoping period. A mailing list has been assembled to facilitate preparation of the EIS. This list includes DC and federal agencies with jurisdiction or other interests in the alternatives. In addition, the mailing list includes adjacent property owners and other interested parties, such as historic preservation groups. Those on this list will receive notices and documents related to EIS preparation. Anyone wishing to be added to the mailing list may request to be added at the project Web site *www.mbweis.com* or by contacting the EIS project manager at the address provided below.

FOR FURTHER INFORMATION CONTACT: Mr. William Sadlon, MBW EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

SUPPLEMENTARY INFORMATION: The USMC is preparing an EIS to analyze the potential effects resulting from implementation of several construction, repair, and renovation projects at or proximate to the Marine Barracks Washington scheduled for completion within the next 5 years. The principal project to be analyzed is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. Renovation and improvement projects include interior renovations to Buildings 7 and 8 at the Main Post; improvements to the MBW

Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, pedestrian amenities, and landscaping throughout the installation. The EIS is also intended to provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available. Principal among these projects is the potential reuse of the Building 20 site. Other projects include renovation of Building 9 to accommodate relocation of units currently housed in temporary facilities aboard Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once these actions become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The purpose of the proposed action is to address existing and anticipated facility deficiencies at MBW. The proposed action is needed to better support the functions of the USMC units assigned to the MBW and, in the case of the BEQ Complex replacement project, to meet current requirements for adequate space and mission support functions, space configurations, DoD Quality of Life standards, life safety, sustainability, and energy efficiency, and Anti-Terrorism and Force Protection (AT/FP) requirements. Building 20 cannot be renovated or redesigned within its existing footprint to meet those standards. The renovations for Buildings 7 and 8 are to upgrade the buildings to meet certain AT/FP and life safety standards, improve space utilization, and meet sustainability goals. The improvements to the MBW Annex gate at 7th and K Streets and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation would blend MBW facilities with the neighborhood.

Alternatives Development: The action alternatives analyzed in the EIS regard implementation of specific projects. Sufficient detail is available to fully analyze some proposed projects in the EIS; other proposed projects are analyzed programmatically, with the expectation that additional NEPA analyses will be conducted when more detail is available.

The primary project to be analyzed in the EIS is the BEQ Complex replacement project, which includes the acquisition of land on which to construct the replacement facilities. The pre-NEPA agency and public engagement effort referred to as the Community Integrated Master Plan process that preceded this EIS effort provided a foundation for the required rigorous exploration of a reasonable range of alternative sites to meet the purpose and need with respect to the BEQ Complex replacement project. The following screening criteria were used to further refine and narrow the range of alternative sites for the BEQ Complex project.

The location must be within a 10-minute "reasonable walking distance" of the MBW Main Post Main Gate Entrance (defined as an approximately 2,000-foot radius of the Main Post Main Gate Entrance). The site must meet the minimum developable area requirements, including setback distances to meet AT/FP standards, while also complying with applicable laws governing height restrictions. The space requirement for the BEQ Complex is 191,405 square feet (SF), which includes supporting facilities and parking. Any site chosen must not be a site that currently provides or is planned to provide public services for DC residents, to include public housing, education, or public recreation services.

Based on the siting criteria, four potential sites have been identified for possible acquisition and development of facilities to meet the BEQ Complex replacement requirements. The four sites are defined in terms of squares and adjacent streets, as applicable. A "square" is the unit of land defined by the DC Surveyor that normally consists of a single city block and contains recorded tax lots.

Site A is a privately-owned 3.0-acre site composed of Square 929, Square 930, and L Street between 6th and 9th Streets. Site B is a privately-owned 1.8-acre site that encompasses Square 976 and a segment of L Street between 10th and 11th Streets. Site C comprises a portion of Square 853 just west of Washington Navy Yard in the Southeast Federal Center. The federally-owned 2.1-acre site is bound by M Street SE to the north and Tingey Street to the south. Site D, owned by the U.S. Navy, is approximately 2.2 acres and located on the northeast corner of Washington Navy Yard. It is bound by 11th Street SE to the east and M Street SE to the north and comprises portions of Squares 977 and 953 within the Washington Navy Yard boundary.

Implementation of the Site A alternative would require acquisition of both squares and closure of and construction on L Street between 8th and 9th Streets. Implementation of the 191,405 SF BEQ Complex at Site B would require the vehicular closure of L Street between 10th and 11th Streets and utilize the closed road right-of-way and a portion of existing Virginia Avenue Park open space buffer to satisfy vehicular AT/FP standoff requirements (while also not affecting use of the park). Implementation of Site C would allow for reduced AT/FP setbacks, given its adjacency to the Washington Navy Yard. If the Site D alternative was implemented, the BEQ Complex would be constructed entirely within the Washington Navy Yard boundary.

The No-Action Alternative for the BEQ Complex project is to continue to utilize and maintain the existing inadequate Building 20 BEQ Complex. The No-Action Alternative does not meet the purpose and need for the action, but must be analyzed as the baseline against which the impacts associated with action alternatives will be evaluated.

Alternatives for the renovation and improvement projects to be analyzed in detail in the EIS consist of alternative space layouts and functional space assignments for MBW units. In some cases, the alternatives may be limited to implementing the project or taking no action. The No Action Alternative for the renovation and improvement projects would be to not implement interior renovations, which would result in continued inefficient space utilization functional layouts and energy systems, life safety issues, and hindering MBW's ability to meet sustainability goals.

Environmental Compliance: The EIS would evaluate potential environmental effects associated with each of the alternatives for each of the analyzed projects on the following: safety, land use, recreation, air quality, socioeconomics and environmental justice, water resources, noise, cultural resources, natural resources, traffic/transportation, hazardous materials and waste, and utilities. Relevant and reasonable measures that could avoid or mitigate adverse environmental effects will also be analyzed. Additionally, the USMC will undertake consultations required by the National Historic Preservation Act and any other applicable laws or regulations.

Schedule: This Notice of Intent is the first phase of the EIS process and announces the 30-day public comment period to identify community concerns and local issues that should be addressed in the EIS. The next phase occurs when a Notice of Availability (NOA) is published in the **Federal Register** and local media to publicly announce the release of the Draft EIS in Summer 2014. A 45-day public comment period for the Draft EIS will commence upon publication of the NOA in the **Federal Register**. The USMC will consider and respond to all comments

received on the Draft EIS when preparing the Final EIS. The USMC intends to issue the Final EIS in Winter 2014/2015, at which time an NOA would be published in the **Federal Register** and local media.

A Record of Decision is anticipated in early 2015.

Dated: August 29, 2013.

P.A. Richelmi,

Lieutenant, Office of the Judge Advocate General, U.S. Navy, Alternate Federal Register Liaison Officer.

[FR Doc. 2013–21713 Filed 9–5–13; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF EDUCATION

[Docket No. ED–2013–ICCD–0118]

Agency Information Collection Activities; Comment Request; Application for Approval To Participate in Federal Student Financial Aid Programs

AGENCY: Federal Student Aid (FSA), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 *et seq.*), ED is proposing an extension of an existing information collection.

DATES: Interested persons are invited to submit comments on or before November 5, 2013.

ADDRESSES: Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting Docket ID number ED–2013–ICCD–0118 or via postal mail, commercial delivery, or hand delivery. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Room, 2E103 Washington, DC 20202–4537.

FOR FURTHER INFORMATION CONTACT: For questions related to collection activities or burden, please call Kate Mullan, 202–401–0563 or electronically mail *ICDocketMgr@ed.gov*. Please do not send comments here.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Application for Approval to Participate in Federal Student Financial Aid Programs

OMB Control Number: 1845–0012

Type of Review: An extension of an existing information collection.

Respondents/Affected Public: Private Sector, State, Local, or Tribal Governments

Total Estimated Number of Annual Responses: 7,246

Total Estimated Number of Annual Burden Hours: 24,352

Abstract: The Higher Education Act of 1965, as amended requires postsecondary institutions to complete and submit this application as a condition of eligibility for any of the Title IV student financial assistance programs and for the other postsecondary programs authorize by the HEA. The institution must submit the form (1) Initially when it first seeks to become eligible for the Title IV programs; (2) when its program participation agreement expires (recertification); (3) when it changes ownership, merges, or changes structure, (4) to be reinstated to participate in the Title IV programs, (5) to notify the Department when it makes certain changes, e.g. name or address; and (5) if it wishes to have a new program (outside its current scope) or new location approved for Title IV purposes.

Kate Mullan,

Acting Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management.

[FR Doc. 2013–21675 Filed 9–5–13; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Privacy Act of 1974; Computer Matching Program Between the Department of Education (ED) and the Social Security Administration (SSA)

AGENCY: Department of Education.

ACTION: Notice.

SUMMARY: Pursuant to the Computer Matching and Privacy Protection Act of 1988, the Computer Matching and Privacy Protections Amendments of 1990, and Office of Management and Budget (OMB) guidance on the conduct of computer matching programs, notice is hereby given of the renewal of the computer matching program between the ED (recipient agency), and the SSA (source agency). This renewal of the computer matching program will become effective as explained in paragraph 5.

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974 (5 U.S.C. 552a), as amended, OMB Final Guidance Interpreting the Provisions of Public Law 100–503, the Computer Matching and Privacy Protection Act of 1988, published in the **Federal Register** on June 19, 1989 (54 FR 25818), and OMB Circular No. A–130, Transmittal Memorandum #4, Management of Federal Information Resources (November 28, 2000), we provide the following information:

1. *Names of Participating Agencies.*

The U.S. Department of Education and the Social Security Administration.

2. *Purpose of the Match.*

The purpose of this matching program between ED and SSA is to assist the Secretary of Education with verification of immigration status and Social Security numbers (SSNs) under 20 U.S.C. 1091(g) and (p). SSA will verify the issuance of an SSN to, and will confirm the citizenship status of, those students and parents applying for financial assistance programs authorized under title IV of the Higher Education Act of 1965, as amended (HEA). Verification of this information by SSA will help ED satisfy its obligation to ensure that individuals applying for financial assistance meet

Enclosure 2. Figures of Proposed Action

MBW Planned Project Sites, Location Map

Marine Barracks Washington, DC

Source: DC GIS Data Clearinghouse/Catalog

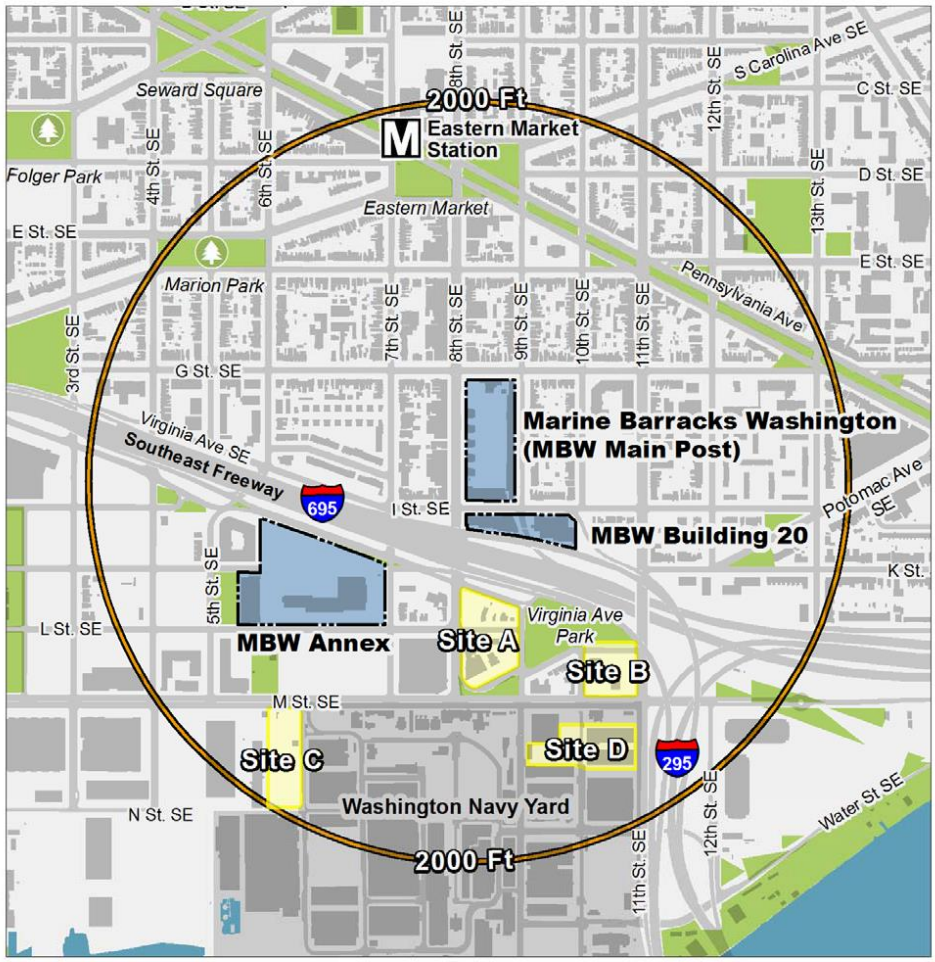
Key

MBW Projects
- 2014-2018
- Beyond 2018

MBW Sites

Park

8



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

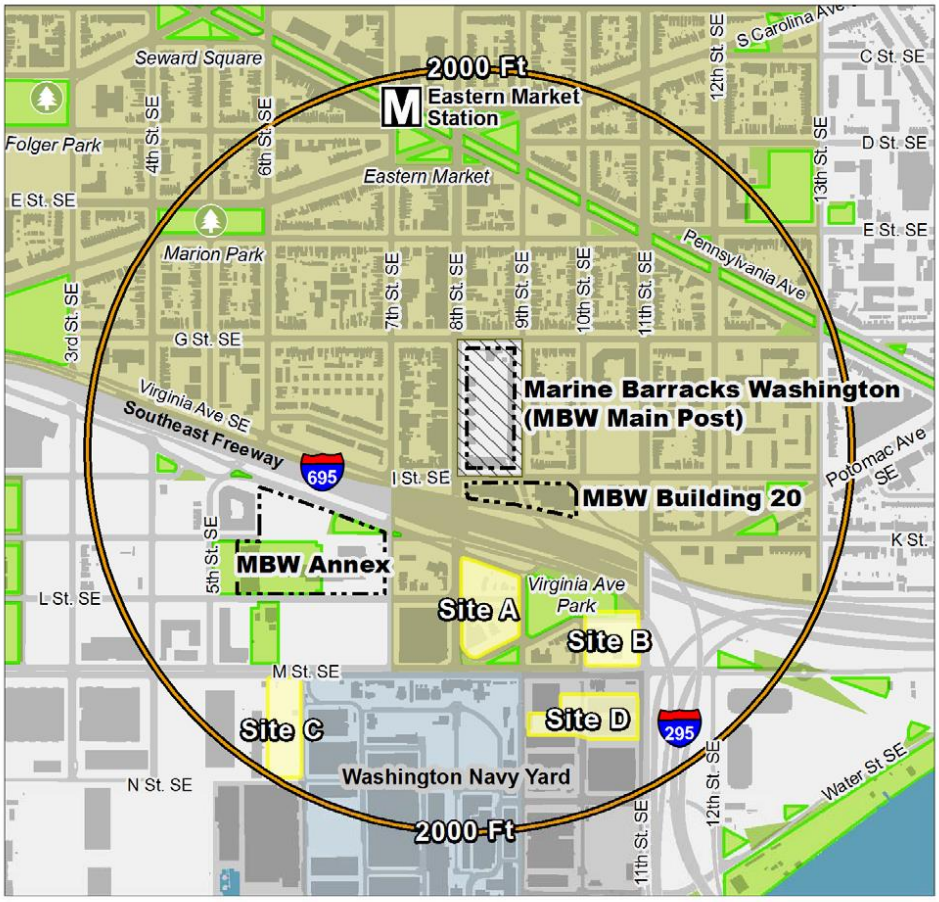
0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- 2000 Ft Buffer from MBW Main Post
- Buildings
- Roads
- Parks
- WaterPly

Enclosure 3. Preliminary Draft APE for the Proposed Action



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- Preliminary Draft Area of Potential Effects (APE)
- Buildings
- Roads

Historic Districts

- Capitol Hill
- Marine Barracks (National Historic Landmark)
- Washington Navy Yard (National Historic Landmark)
- L'Enfant Reservations
- National Parks

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

National Park Service
1100 Ohio Drive, SW
Washington D.C. 20242

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR MULTIPLE PROJECTS IN SUPPORT OF MARINE BARRACKS WASHINGTON (MBW)

Dear Sir or Madam:

The Department of the Navy, U.S. Marine Corps, is in the initial stages of preparing an Environmental Impact Statement (EIS) to evaluate the potential impacts that could result from implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C.

The proposed action is to implement several construction, renovation, and repair projects scheduled for completion in the next 5 years to address existing and anticipated facilities deficiencies at MBW. The EIS will also provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed National Environmental Policy Act (NEPA) analysis is not yet available.

The principal project to be analyzed in detail is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. This project was the focus of a pre-NEPA agency and public engagement process referred to as the Community Integrated Master Plan (CIMP) process. Other projects to be analyzed in detail include interior renovations to Buildings 7 and 8 at the MBW Main Post; improvements to the MBW Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation that would blend MBW facilities with the neighborhood. At this time, it is anticipated the EIS would evaluate four action alternatives for the BEQ Complex project, as well as the No Action Alternative. The attached enclosures depict the locations of the existing MBW properties and potential BEQ Complex sites.

Other longer-term (2018 or later) projects to be analyzed programmatically involve reuse of Building 20 or the Building 20 site and interior renovations to Building 9 to accommodate relocation of functions from the Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once

1

these projects become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The potential environmental impacts of the proposed action will be analyzed in the EIS. In proceeding with the planning of this undertaking, we intend to coordinate our Section 106 National Historic Preservation Act (NHPA) consultation with the development of the EIS pursuant to 36 CFR 800.8, and use the EIS as our primary NHPA consultation documentation. Additionally, to fulfill our responsibilities under 36 CFR 800.3(e) and 800.4(a)(3), we will hold a Section 106 public meeting to solicit input from the public on potential effects on historic properties resulting from the proposed action. The public meeting will be held in conjunction with the EIS public scoping meeting on September 24, 2013 from 5:30 p.m. to 8:30 p.m., at Tyler Elementary School, located at 1001 G St SE, Washington, D.C. 20390. In addition to the public scoping meeting, the Marine Corps will hold an agency scoping meeting from 4:30 p.m. to 5:30 p.m., prior to the public scoping meeting. During that time, the Marine Corps will give a brief presentation of the Proposed Action and will be available for open discussion with agencies regarding issues and concerns.

Pursuant to 36 CFR 800.4(a)(1), the Marine Corps is consulting with the DC Historic Preservation Office to define the Area of Potential Effects (APE) for the proposed action. Once defined, pursuant to 36 CFR 800.4(a)(2), background research and cultural resource surveys will be initiated to identify historic properties within the APE. The results of these identification efforts, in addition to an assessment of the undertaking's effects on any historic properties within the APE, will be the subject of future consultation on this project as part of the Section 106 process.

The Marine Corps invites you to participate in the Section 106 consultation process. For this initial phase of consultation, the Marine Corps respectfully requests that you identify any concerns you may have regarding the Proposed Action and respond by October 7, 2013 so that we may address those concerns and incorporate them into the Draft EIS. In addition, please provide any comments you have regarding our efforts to identify all potential consulting parties and gather information, as outlined in 36 CFR 800.3(f) and 800.4(a)(4).

If you have any questions or need further information on the project, please contact Sherry Frear, the Section 106 consultation coordinator at Headquarters Marine Corps/Marine

Corps Installations Command, at sherry.frear@usmc.mil or (571) 256-2838. Thank you in advance for your input on this important project.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

Enclosures: 1. Notice of Intent to Prepare an EIS
2. Proposed Action and Alternatives Maps
3. Preliminary Draft APE for the Proposed Action

3

Enclosure 1.

Tacoma Convention Center, 1500 Broadway, Tacoma, Washington 98402 on Thursday, October 17, 2013, from 5:00 p.m. to 8:00 p.m.

In addition, an "online scoping meeting" will be continuously hosted on the EIS Internet Web site at *www.millenniumbulkeiswa.gov* for the duration of the scoping period.

b. Potentially significant issues to be analyzed in the EIS include, but are not limited to direct, indirect, and cumulative effects of the project-specific activities proposed within the NEPA scope of analysis as described above on navigation (e.g., vessel traffic and navigational safety); aquatic habitats; aquatic species, including Endangered Species Act-listed species and Washington State species of concern; Tribal treaty rights; wetland and riparian habitat; wildlife; vehicle traffic; cultural, historic, and archeological resources; air and water quality; noise; recreation; land use; and aesthetics.

c. The Corps will consult with the Washington State Historic Preservation Officer and applicable Tribes to comply with the National Historic Preservation Act; the U.S. Fish and Wildlife Service and National Marine Fisheries Service to comply with the Endangered Species Act; the National Marine Fisheries Service to comply with the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act; and applicable Tribes to comply with reserved treaty fishing rights.

d. Preparation of the draft EIS will begin after the close of the scoping period. The draft EIS is currently scheduled to be available for public review and comment by June 2015.

e. A 90-day public review period will be provided for interested parties to review and comment on the draft EIS. Interested parties are encouraged to contact the Corps if they wish to be notified when the draft EIS is issued.

f. All comments received will become part of the administrative record for this project and subject to public release to third-parties, including any personally identifiable information such as name, phone number, and address, included in the comment.

Dated: August 29, 2013.

Bruce A. Estok,

Colonel, Corps of Engineers, District Engineer.

[FR Doc. 2013–21780 Filed 9–5–13; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Intent To Prepare an Environmental Impact Statement for Multiple Projects in Support of the Marine Barracks Washington, District of Columbia

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: Pursuant to Section (102)(2)(c) of the National Environmental Policy Act (NEPA) of 1969, and regulations implemented by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] Parts 1500–1508). Department of the Navy (DoN) NEPA regulations (32 CFR Part 775), and United States Marine Corps (USMC) NEPA directives (Marine Corps Order P5090.2A, changes 1 and 2), the DoN intends to prepare an Environmental Impact Statement (EIS) for several proposed construction, repair, and renovation projects in support of the Marine Barracks Washington (MBW), District of Columbia (DC).

Dates and Addresses: The DoN, USMC, is initiating a 30-day public scoping process to identify community interests and local concerns to be addressed in the EIS, which starts with the publication of this Notice of Intent and ends on October 7, 2013. A public scoping meeting, using an informal open house format, will be held from 5:30 p.m. to 8:30 p.m. on September 24, 2013 at Tyler Elementary School, 1001 G St SE., Washington, DC 20390.

The public is invited to attend this meeting to view project-related displays, speak with USMC representatives, and submit verbal or written comments. All comments regarding the scope of issues that the USMC should consider during EIS preparation must be received prior to October 7, 2013 to be fully considered. Additional information concerning the meeting and the proposed alternatives is available on the EIS Web site at *www.mbweis.com* and will be announced in local and regional newspapers. Please submit requests for special assistance, sign language interpretation for the hearing impaired, or other auxiliary aids needed at the scoping meeting to the MBW Public Affairs Officer, Captain Jack Norton, at 202–433–6682 by September 13, 2013.

Concurrent with the NEPA process, the USMC is initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, one designated area of the room will focus on the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

Submitting Comments: Federal, state, and local agencies and members of the public are encouraged to provide oral and written comments regarding the scope of the EIS, reasonable alternatives, and specific issues or topics of interest. There are three ways comments can be submitted: (1) In person at the public scoping open house meeting, (2) using the project's public Web site comment form at *www.mbweis.com,* or (3) providing written comments through U.S. mail. All comments on the scope of the EIS or any specific concerns regarding potential impacts to the environment should be submitted or postmarked no later than October 1, 2013. Comments submitted by mail should be sent to: Mr. William Sadlon, MBW CIMP EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

The USMC will consider all comments received during the scoping period. A mailing list has been assembled to facilitate preparation of the EIS. This list includes DC and federal agencies with jurisdiction or other interests in the alternatives. In addition, the mailing list includes adjacent property owners and other interested parties, such as historic preservation groups. Those on this list will receive notices and documents related to EIS preparation. Anyone wishing to be added to the mailing list may request to be added at the project Web site *www.mbweis.com* or by contacting the EIS project manager at the address provided below.

FOR FURTHER INFORMATION CONTACT: Mr. William Sadlon, MBW EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

SUPPLEMENTARY INFORMATION: The USMC is preparing an EIS to analyze the potential effects resulting from implementation of several construction, repair, and renovation projects at or proximate to the Marine Barracks Washington scheduled for completion within the next 5 years. The principal project to be analyzed is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. Renovation and improvement projects include interior renovations to Buildings 7 and 8 at the Main Post; improvements to the MBW

Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, pedestrian amenities, and landscaping throughout the installation. The EIS is also intended to provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available. Principal among these projects is the potential reuse of the Building 20 site. Other projects include renovation of Building 9 to accommodate relocation of units currently housed in temporary facilities aboard Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once these actions become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The purpose of the proposed action is to address existing and anticipated facility deficiencies at MBW. The proposed action is needed to better support the functions of the USMC units assigned to the MBW and, in the case of the BEQ Complex replacement project, to meet current requirements for adequate space and mission support functions, space configurations, DoD Quality of Life standards, life safety, sustainability, and energy efficiency, and Anti-Terrorism and Force Protection (AT/FP) requirements. Building 20 cannot be renovated or redesigned within its existing footprint to meet those standards. The renovations for Buildings 7 and 8 are to upgrade the buildings to meet certain AT/FP and life safety standards, improve space utilization, and meet sustainability goals. The improvements to the MBW Annex gate at 7th and K Streets and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation would blend MBW facilities with the neighborhood.

Alternatives Development: The action alternatives analyzed in the EIS regard implementation of specific projects. Sufficient detail is available to fully analyze some proposed projects in the EIS; other proposed projects are analyzed programmatically, with the expectation that additional NEPA analyses will be conducted when more detail is available.

The primary project to be analyzed in the EIS is the BEQ Complex replacement project, which includes the acquisition of land on which to construct the replacement facilities. The pre-NEPA agency and public engagement effort referred to as the Community Integrated Master Plan process that preceded this EIS effort provided a foundation for the required rigorous exploration of a reasonable range of alternative sites to meet the purpose and need with respect to the BEQ Complex replacement project. The following screening criteria were used to further refine and narrow the range of alternative sites for the BEQ Complex project.

The location must be within a 10-minute "reasonable walking distance" of the MBW Main Post Main Gate Entrance (defined as an approximately 2,000-foot radius of the Main Post Main Gate Entrance). The site must meet the minimum developable area requirements, including setback distances to meet AT/FP standards, while also complying with applicable laws governing height restrictions. The space requirement for the BEQ Complex is 191,405 square feet (SF), which includes supporting facilities and parking. Any site chosen must not be a site that currently provides or is planned to provide public services for DC residents, to include public housing, education, or public recreation services.

Based on the siting criteria, four potential sites have been identified for possible acquisition and development of facilities to meet the BEQ Complex replacement requirements. The four sites are defined in terms of squares and adjacent streets, as applicable. A "square" is the unit of land defined by the DC Surveyor that normally consists of a single city block and contains recorded tax lots.

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Environmental Compliance: The EIS would evaluate potential environmental effects associated with each of the alternatives for each of the analyzed projects on the following: safety, land use, recreation, air quality, socioeconomics and environmental justice, water resources, noise, cultural resources, natural resources, traffic/transportation, hazardous materials and waste, and utilities. Relevant and reasonable measures that could avoid or mitigate adverse environmental effects will also be analyzed. Additionally, the USMC will undertake consultations required by the National Historic Preservation Act and any other applicable laws or regulations.

Schedule: This Notice of Intent is the first phase of the EIS process and announces the 30-day public comment period to identify community concerns and local issues that should be addressed in the EIS. The next phase occurs when a Notice of Availability (NOA) is published in the **Federal Register** and local media to publicly announce the release of the Draft EIS in Summer 2014. A 45-day public comment period for the Draft EIS will commence upon publication of the NOA in the **Federal Register**. The USMC will consider and respond to all comments

received on the Draft EIS when preparing the Final EIS. The USMC intends to issue the Final EIS in Winter 2014/2015, at which time an NOA would be published in the **Federal Register** and local media.

A Record of Decision is anticipated in early 2015.

Dated: August 29, 2013.

P.A. Richelmi,

Lieutenant, Office of the Judge Advocate General, U.S. Navy, Alternate Federal Register Liaison Officer.

[FR Doc. 2013–21713 Filed 9–5–13; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF EDUCATION

[Docket No. ED–2013–ICCD–0118]

Agency Information Collection Activities; Comment Request; Application for Approval To Participate in Federal Student Financial Aid Programs

AGENCY: Federal Student Aid (FSA), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 *et seq.*), ED is proposing an extension of an existing information collection.

DATES: Interested persons are invited to submit comments on or before November 5, 2013.

ADDRESSES: Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting Docket ID number ED–2013–ICCD–0118 or via postal mail, commercial delivery, or hand delivery. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Room, 2E103 Washington, DC 20202–4537.

FOR FURTHER INFORMATION CONTACT: For questions related to collection activities or burden, please call Kate Mullan, 202–401–0563 or electronically mail *ICDocketMgr@ed.gov*. Please do not send comments here.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Application for Approval to Participate in Federal Student Financial Aid Programs

OMB Control Number: 1845–0012

Type of Review: An extension of an existing information collection.

Respondents/Affected Public: Private Sector, State, Local, or Tribal Governments

Total Estimated Number of Annual Responses: 7,246

Total Estimated Number of Annual Burden Hours: 24,352

Abstract: The Higher Education Act of 1965, as amended requires postsecondary institutions to complete and submit this application as a condition of eligibility for any of the Title IV student financial assistance programs and for the other postsecondary programs authorize by the HEA. The institution must submit the form (1) Initially when it first seeks to become eligible for the Title IV programs; (2) when its program participation agreement expires (recertification); (3) when it changes ownership, merges, or changes structure, (4) to be reinstated to participate in the Title IV programs, (5) to notify the Department when it makes certain changes, e.g. name or address; and (5) if it wishes to have a new program (outside its current scope) or new location approved for Title IV purposes.

Kate Mullan,

Acting Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management.

[FR Doc. 2013–21675 Filed 9–5–13; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Privacy Act of 1974; Computer Matching Program Between the Department of Education (ED) and the Social Security Administration (SSA)

AGENCY: Department of Education.

ACTION: Notice.

SUMMARY: Pursuant to the Computer Matching and Privacy Protection Act of 1988, the Computer Matching and Privacy Protections Amendments of 1990, and Office of Management and Budget (OMB) guidance on the conduct of computer matching programs, notice is hereby given of the renewal of the computer matching program between the ED (recipient agency), and the SSA (source agency). This renewal of the computer matching program will become effective as explained in paragraph 5.

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974 (5 U.S.C. 552a), as amended, OMB Final Guidance Interpreting the Provisions of Public Law 100–503, the Computer Matching and Privacy Protection Act of 1988, published in the **Federal Register** on June 19, 1989 (54 FR 25818), and OMB Circular No. A–130, Transmittal Memorandum #4, Management of Federal Information Resources (November 28, 2000), we provide the following information:

1. *Names of Participating Agencies.*

The U.S. Department of Education and the Social Security Administration.

2. *Purpose of the Match.*

The purpose of this matching program between ED and SSA is to assist the Secretary of Education with verification of immigration status and Social Security numbers (SSNs) under 20 U.S.C. 1091(g) and (p). SSA will verify the issuance of an SSN to, and will confirm the citizenship status of, those students and parents applying for financial assistance programs authorized under title IV of the Higher Education Act of 1965, as amended (HEA). Verification of this information by SSA will help ED satisfy its obligation to ensure that individuals applying for financial assistance meet

Enclosure 2. Figures of Proposed Action

MBW Planned Project Sites, Location Map

Marine Barracks Washington, DC

Source: DC GIS Data Clearinghouse/Catalog

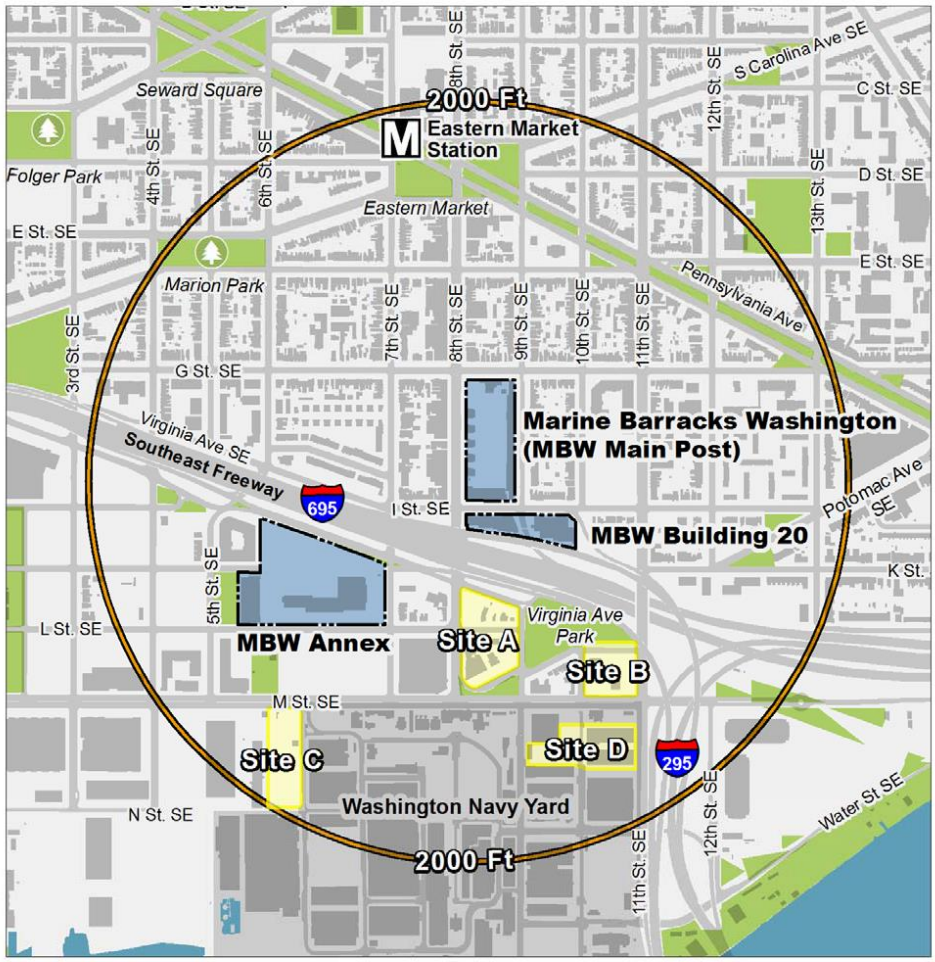
Key

MBW Projects
- 2014-2018
- Beyond 2018

MBW Sites

Park

8



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- 2000 Ft Buffer from MBW Main Post
- Buildings
- Roads
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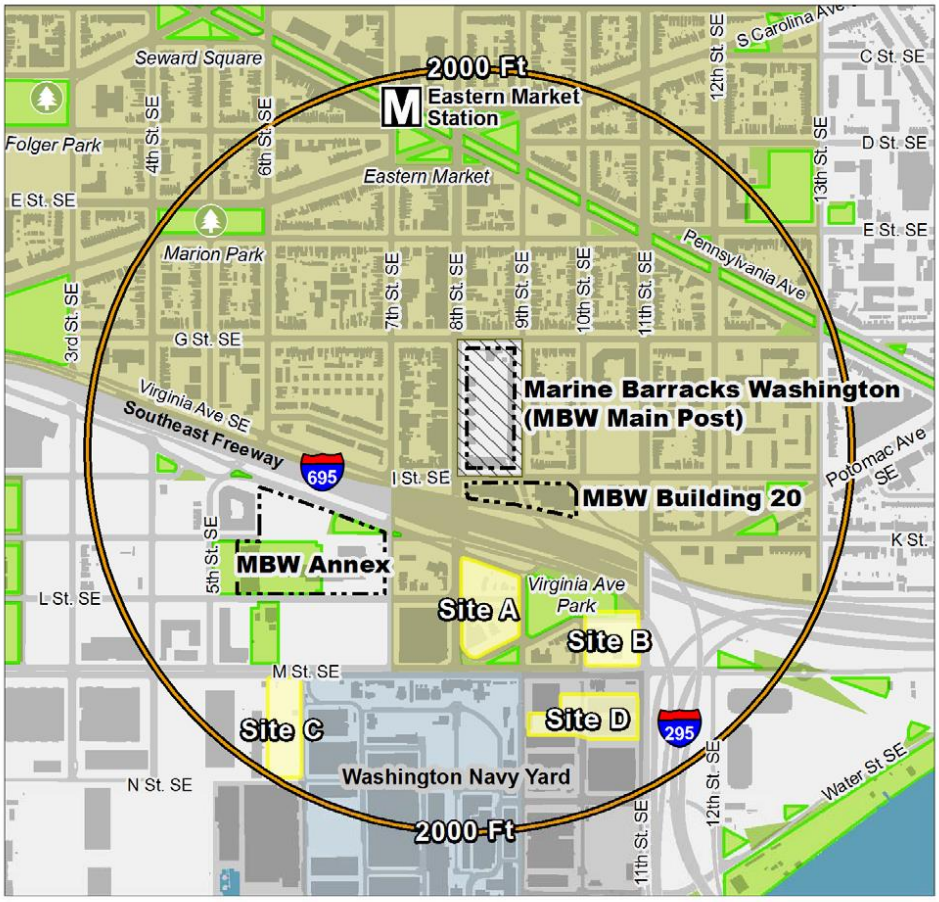
Enclosure 3. Preliminary Draft APE for the Proposed Action



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- Marine Barracks Washington Sites
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- Buildings
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Historic Districts

- Capitol Hill
- Marine Barracks (National Historic Landmark)
- Washington Navy Yard (National Historic Landmark)
- L'Enfant Reservations
- National Parks

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Capitol Hill Restoration Society
PO Box 15264
Washington, DC 20003

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR MULTIPLE PROJECTS IN SUPPORT OF MARINE BARRACKS WASHINGTON (MBW)

Dear Sir or Madam:

The Department of the Navy, U.S. Marine Corps, is in the initial stages of preparing an Environmental Impact Statement (EIS) to evaluate the potential impacts that could result from implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C.

The proposed action is to implement several construction, renovation, and repair projects scheduled for completion in the next 5 years to address existing and anticipated facilities deficiencies at MBW. The EIS will also provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed National Environmental Policy Act (NEPA) analysis is not yet available.

The principal project to be analyzed in detail is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. This project was the focus of a pre-NEPA agency and public engagement process referred to as the Community Integrated Master Plan (CIMP) process. Other projects to be analyzed in detail include interior renovations to Buildings 7 and 8 at the MBW Main Post; improvements to the MBW Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation that would blend MBW facilities with the neighborhood. At this time, it is anticipated the EIS would evaluate four action alternatives for the BEQ Complex project, as well as the No Action Alternative. The attached enclosures depict the locations of the existing MBW properties and potential BEQ Complex sites.

Other longer-term (2018 or later) projects to be analyzed programmatically involve reuse of Building 20 or the Building 20 site and interior renovations to Building 9 to accommodate relocation of functions from the Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once

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these projects become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The potential environmental impacts of the proposed action will be analyzed in the EIS. In proceeding with the planning of this undertaking, we intend to coordinate our Section 106 National Historic Preservation Act (NHPA) consultation with the development of the EIS pursuant to 36 CFR 800.8, and use the EIS as our primary NHPA consultation documentation. Additionally, to fulfill our responsibilities under 36 CFR 800.3(e) and 800.4(a)(3), we will hold a Section 106 public meeting to solicit input from the public on potential effects on historic properties resulting from the proposed action. The public meeting will be held in conjunction with the EIS public scoping meeting on September 24, 2013 from 5:30 p.m. to 8:30 p.m., at Tyler Elementary School, located at 1001 G St SE, Washington, D.C. 20390. In addition to the public scoping meeting, the Marine Corps will hold an agency scoping meeting from 4:30 p.m. to 5:30 p.m., prior to the public scoping meeting. During that time, the Marine Corps will give a brief presentation of the Proposed Action and will be available for open discussion with agencies regarding issues and concerns.

Pursuant to 36 CFR 800.4(a)(1), the Marine Corps is consulting with the DC Historic Preservation Office to define the Area of Potential Effects (APE) for the proposed action. Once defined, pursuant to 36 CFR 800.4(a)(2), background research and cultural resource surveys will be initiated to identify historic properties within the APE. The results of these identification efforts, in addition to an assessment of the undertaking's effects on any historic properties within the APE, will be the subject of future consultation on this project as part of the Section 106 process.

The Marine Corps invites you to participate in the Section 106 consultation process. For this initial phase of consultation, the Marine Corps respectfully requests that you identify any concerns you may have regarding the Proposed Action and respond by October 7, 2013 so that we may address those concerns and incorporate them into the Draft EIS. In addition, please provide any comments you have regarding our efforts to identify all potential consulting parties and gather information, as outlined in 36 CFR 800.3(f) and 800.4(a)(4).

If you have any questions or need further information on the project, please contact Sherry Frear, the Section 106 consultation coordinator at Headquarters Marine Corps/Marine

Corps Installations Command, at sherry.frear@usmc.mil or (571) 256-2838. Thank you in advance for your input on this important project.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

Enclosures: 1. Notice of Intent to Prepare an EIS
2. Proposed Action and Alternatives Maps
3. Preliminary Draft APE for the Proposed Action

3

Enclosure 1.

Tacoma Convention Center, 1500 Broadway, Tacoma, Washington 98402 on Thursday, October 17, 2013, from 5:00 p.m. to 8:00 p.m.

In addition, an "online scoping meeting" will be continuously hosted on the EIS Internet Web site at *www.millenniumbulkeiswa.gov* for the duration of the scoping period.

b. Potentially significant issues to be analyzed in the EIS include, but are not limited to direct, indirect, and cumulative effects of the project-specific activities proposed within the NEPA scope of analysis as described above on navigation (e.g., vessel traffic and navigational safety); aquatic habitats; aquatic species, including Endangered Species Act-listed species and Washington State species of concern; Tribal treaty rights; wetland and riparian habitat; wildlife; vehicle traffic; cultural, historic, and archeological resources; air and water quality; noise; recreation; land use; and aesthetics.

c. The Corps will consult with the Washington State Historic Preservation Officer and applicable Tribes to comply with the National Historic Preservation Act; the U.S. Fish and Wildlife Service and National Marine Fisheries Service to comply with the Endangered Species Act; the National Marine Fisheries Service to comply with the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act; and applicable Tribes to comply with reserved treaty fishing rights.

d. Preparation of the draft EIS will begin after the close of the scoping period. The draft EIS is currently scheduled to be available for public review and comment by June 2015.

e. A 90-day public review period will be provided for interested parties to review and comment on the draft EIS. Interested parties are encouraged to contact the Corps if they wish to be notified when the draft EIS is issued.

f. All comments received will become part of the administrative record for this project and subject to public release to third-parties, including any personally identifiable information such as name, phone number, and address, included in the comment.

Dated: August 29, 2013.

Bruce A. Estok,

Colonel, Corps of Engineers, District Engineer.

[FR Doc. 2013–21780 Filed 9–5–13; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Intent To Prepare an Environmental Impact Statement for Multiple Projects in Support of the Marine Barracks Washington, District of Columbia

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: Pursuant to Section (102)(2)(c) of the National Environmental Policy Act (NEPA) of 1969, and regulations implemented by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] Parts 1500–1508). Department of the Navy (DoN) NEPA regulations (32 CFR Part 775), and United States Marine Corps (USMC) NEPA directives (Marine Corps Order P5090.2A, changes 1 and 2), the DoN intends to prepare an Environmental Impact Statement (EIS) for several proposed construction, repair, and renovation projects in support of the Marine Barracks Washington (MBW), District of Columbia (DC).

Dates and Addresses: The DoN, USMC, is initiating a 30-day public scoping process to identify community interests and local concerns to be addressed in the EIS, which starts with the publication of this Notice of Intent and ends on October 7, 2013. A public scoping meeting, using an informal open house format, will be held from 5:30 p.m. to 8:30 p.m. on September 24, 2013 at Tyler Elementary School, 1001 G St SE., Washington, DC 20390.

The public is invited to attend this meeting to view project-related displays, speak with USMC representatives, and submit verbal or written comments. All comments regarding the scope of issues that the USMC should consider during EIS preparation must be received prior to October 7, 2013 to be fully considered. Additional information concerning the meeting and the proposed alternatives is available on the EIS Web site at *www.mbweis.com* and will be announced in local and regional newspapers. Please submit requests for special assistance, sign language interpretation for the hearing impaired, or other auxiliary aids needed at the scoping meeting to the MBW Public Affairs Officer, Captain Jack Norton, at 202–433–6682 by September 13, 2013.

Concurrent with the NEPA process, the USMC is initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, one designated area of the room will focus on the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

Submitting Comments: Federal, state, and local agencies and members of the public are encouraged to provide oral and written comments regarding the scope of the EIS, reasonable alternatives, and specific issues or topics of interest. There are three ways comments can be submitted: (1) In person at the public scoping open house meeting, (2) using the project's public Web site comment form at *www.mbweis.com,* or (3) providing written comments through U.S. mail. All comments on the scope of the EIS or any specific concerns regarding potential impacts to the environment should be submitted or postmarked no later than October 1, 2013. Comments submitted by mail should be sent to: Mr. William Sadlon, MBW CIMP EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

The USMC will consider all comments received during the scoping period. A mailing list has been assembled to facilitate preparation of the EIS. This list includes DC and federal agencies with jurisdiction or other interests in the alternatives. In addition, the mailing list includes adjacent property owners and other interested parties, such as historic preservation groups. Those on this list will receive notices and documents related to EIS preparation. Anyone wishing to be added to the mailing list may request to be added at the project Web site *www.mbweis.com* or by contacting the EIS project manager at the address provided below.

FOR FURTHER INFORMATION CONTACT: Mr. William Sadlon, MBW EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

SUPPLEMENTARY INFORMATION: The USMC is preparing an EIS to analyze the potential effects resulting from implementation of several construction, repair, and renovation projects at or proximate to the Marine Barracks Washington scheduled for completion within the next 5 years. The principal project to be analyzed is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. Renovation and improvement projects include interior renovations to Buildings 7 and 8 at the Main Post; improvements to the MBW

Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, pedestrian amenities, and landscaping throughout the installation. The EIS is also intended to provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available. Principal among these projects is the potential reuse of the Building 20 site. Other projects include renovation of Building 9 to accommodate relocation of units currently housed in temporary facilities aboard Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once these actions become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The purpose of the proposed action is to address existing and anticipated facility deficiencies at MBW. The proposed action is needed to better support the functions of the USMC units assigned to the MBW and, in the case of the BEQ Complex replacement project, to meet current requirements for adequate space and mission support functions, space configurations, DoD Quality of Life standards, life safety, sustainability, and energy efficiency, and Anti-Terrorism and Force Protection (AT/FP) requirements. Building 20 cannot be renovated or redesigned within its existing footprint to meet those standards. The renovations for Buildings 7 and 8 are to upgrade the buildings to meet certain AT/FP and life safety standards, improve space utilization, and meet sustainability goals. The improvements to the MBW Annex gate at 7th and K Streets and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation would blend MBW facilities with the neighborhood.

Alternatives Development: The action alternatives analyzed in the EIS regard implementation of specific projects. Sufficient detail is available to fully analyze some proposed projects in the EIS; other proposed projects are analyzed programmatically, with the expectation that additional NEPA analyses will be conducted when more detail is available.

The primary project to be analyzed in the EIS is the BEQ Complex replacement project, which includes the acquisition of land on which to construct the replacement facilities. The pre-NEPA agency and public engagement effort referred to as the Community Integrated Master Plan process that preceded this EIS effort provided a foundation for the required rigorous exploration of a reasonable range of alternative sites to meet the purpose and need with respect to the BEQ Complex replacement project. The following screening criteria were used to further refine and narrow the range of alternative sites for the BEQ Complex project.

The location must be within a 10-minute "reasonable walking distance" of the MBW Main Post Main Gate Entrance (defined as an approximately 2,000-foot radius of the Main Post Main Gate Entrance). The site must meet the minimum developable area requirements, including setback distances to meet AT/FP standards, while also complying with applicable laws governing height restrictions. The space requirement for the BEQ Complex is 191,405 square feet (SF), which includes supporting facilities and parking. Any site chosen must not be a site that currently provides or is planned to provide public services for DC residents, to include public housing, education, or public recreation services.

Based on the siting criteria, four potential sites have been identified for possible acquisition and development of facilities to meet the BEQ Complex replacement requirements. The four sites are defined in terms of squares and adjacent streets, as applicable. A "square" is the unit of land defined by the DC Surveyor that normally consists of a single city block and contains recorded tax lots.

Site A is a privately-owned 3.0-acre site composed of Square 929, Square 930, and L Street between 6th and 9th Streets. Site B is a privately-owned 1.8-acre site that encompasses Square 976 and a segment of L Street between 10th and 11th Streets. Site C comprises a portion of Square 853 just west of Washington Navy Yard in the Southeast Federal Center. The federally-owned 2.1-acre site is bound by M Street SE to the north and Tingey Street to the south. Site D, owned by the U.S. Navy, is approximately 2.2 acres and located on the northeast corner of Washington Navy Yard. It is bound by 11th Street SE to the east and M Street SE to the north and comprises portions of Squares 977 and 953 within the Washington Navy Yard boundary.

Implementation of the Site A alternative would require acquisition of both squares and closure of and construction on L Street between 8th and 9th Streets. Implementation of the 191,405 SF BEQ Complex at Site B would require the vehicular closure of L Street between 10th and 11th Streets and utilize the closed road right-of-way and a portion of existing Virginia Avenue Park open space buffer to satisfy vehicular AT/FP standoff requirements (while also not affecting use of the park). Implementation of Site C would allow for reduced AT/FP setbacks, given its adjacency to the Washington Navy Yard. If the Site D alternative was implemented, the BEQ Complex would be constructed entirely within the Washington Navy Yard boundary.

The No-Action Alternative for the BEQ Complex project is to continue to utilize and maintain the existing inadequate Building 20 BEQ Complex. The No-Action Alternative does not meet the purpose and need for the action, but must be analyzed as the baseline against which the impacts associated with action alternatives will be evaluated.

Alternatives for the renovation and improvement projects to be analyzed in detail in the EIS consist of alternative space layouts and functional space assignments for MBW units. In some cases, the alternatives may be limited to implementing the project or taking no action. The No Action Alternative for the renovation and improvement projects would be to not implement interior renovations, which would result in continued inefficient space utilization functional layouts and energy systems, life safety issues, and hindering MBW's ability to meet sustainability goals.

Environmental Compliance: The EIS would evaluate potential environmental effects associated with each of the alternatives for each of the analyzed projects on the following: safety, land use, recreation, air quality, socioeconomics and environmental justice, water resources, noise, cultural resources, natural resources, traffic/transportation, hazardous materials and waste, and utilities. Relevant and reasonable measures that could avoid or mitigate adverse environmental effects will also be analyzed. Additionally, the USMC will undertake consultations required by the National Historic Preservation Act and any other applicable laws or regulations.

Schedule: This Notice of Intent is the first phase of the EIS process and announces the 30-day public comment period to identify community concerns and local issues that should be addressed in the EIS. The next phase occurs when a Notice of Availability (NOA) is published in the **Federal Register** and local media to publicly announce the release of the Draft EIS in Summer 2014. A 45-day public comment period for the Draft EIS will commence upon publication of the NOA in the **Federal Register**. The USMC will consider and respond to all comments

received on the Draft EIS when preparing the Final EIS. The USMC intends to issue the Final EIS in Winter 2014/2015, at which time an NOA would be published in the **Federal Register** and local media.

A Record of Decision is anticipated in early 2015.

Dated: August 29, 2013.

P.A. Richelmi,

Lieutenant, Office of the Judge Advocate General, U.S. Navy, Alternate Federal Register Liaison Officer.

[FR Doc. 2013–21713 Filed 9–5–13; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF EDUCATION

[Docket No. ED–2013–ICCD–0118]

Agency Information Collection Activities; Comment Request; Application for Approval To Participate in Federal Student Financial Aid Programs

AGENCY: Federal Student Aid (FSA), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 *et seq.*), ED is proposing an extension of an existing information collection.

DATES: Interested persons are invited to submit comments on or before November 5, 2013.

ADDRESSES: Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting Docket ID number ED–2013–ICCD–0118 or via postal mail, commercial delivery, or hand delivery. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Room, 2E103 Washington, DC 20202–4537.

FOR FURTHER INFORMATION CONTACT: For questions related to collection activities or burden, please call Kate Mullan, 202–401–0563 or electronically mail *ICDocketMgr@ed.gov*. Please do not send comments here.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Application for Approval to Participate in Federal Student Financial Aid Programs

OMB Control Number: 1845–0012

Type of Review: An extension of an existing information collection.

Respondents/Affected Public: Private Sector, State, Local, or Tribal Governments

Total Estimated Number of Annual Responses: 7,246

Total Estimated Number of Annual Burden Hours: 24,352

Abstract: The Higher Education Act of 1965, as amended requires postsecondary institutions to complete and submit this application as a condition of eligibility for any of the Title IV student financial assistance programs and for the other postsecondary programs authorize by the HEA. The institution must submit the form (1) Initially when it first seeks to become eligible for the Title IV programs; (2) when its program participation agreement expires (recertification); (3) when it changes ownership, merges, or changes structure, (4) to be reinstated to participate in the Title IV programs, (5) to notify the Department when it makes certain changes, e.g. name or address; and (5) if it wishes to have a new program (outside its current scope) or new location approved for Title IV purposes.

Kate Mullan,

Acting Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management.

[FR Doc. 2013–21675 Filed 9–5–13; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Privacy Act of 1974; Computer Matching Program Between the Department of Education (ED) and the Social Security Administration (SSA)

AGENCY: Department of Education.

ACTION: Notice.

SUMMARY: Pursuant to the Computer Matching and Privacy Protection Act of 1988, the Computer Matching and Privacy Protections Amendments of 1990, and Office of Management and Budget (OMB) guidance on the conduct of computer matching programs, notice is hereby given of the renewal of the computer matching program between the ED (recipient agency), and the SSA (source agency). This renewal of the computer matching program will become effective as explained in paragraph 5.

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The U.S. Department of Education and the Social Security Administration.

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The purpose of this matching program between ED and SSA is to assist the Secretary of Education with verification of immigration status and Social Security numbers (SSNs) under 20 U.S.C. 1091(g) and (p). SSA will verify the issuance of an SSN to, and will confirm the citizenship status of, those students and parents applying for financial assistance programs authorized under title IV of the Higher Education Act of 1965, as amended (HEA). Verification of this information by SSA will help ED satisfy its obligation to ensure that individuals applying for financial assistance meet

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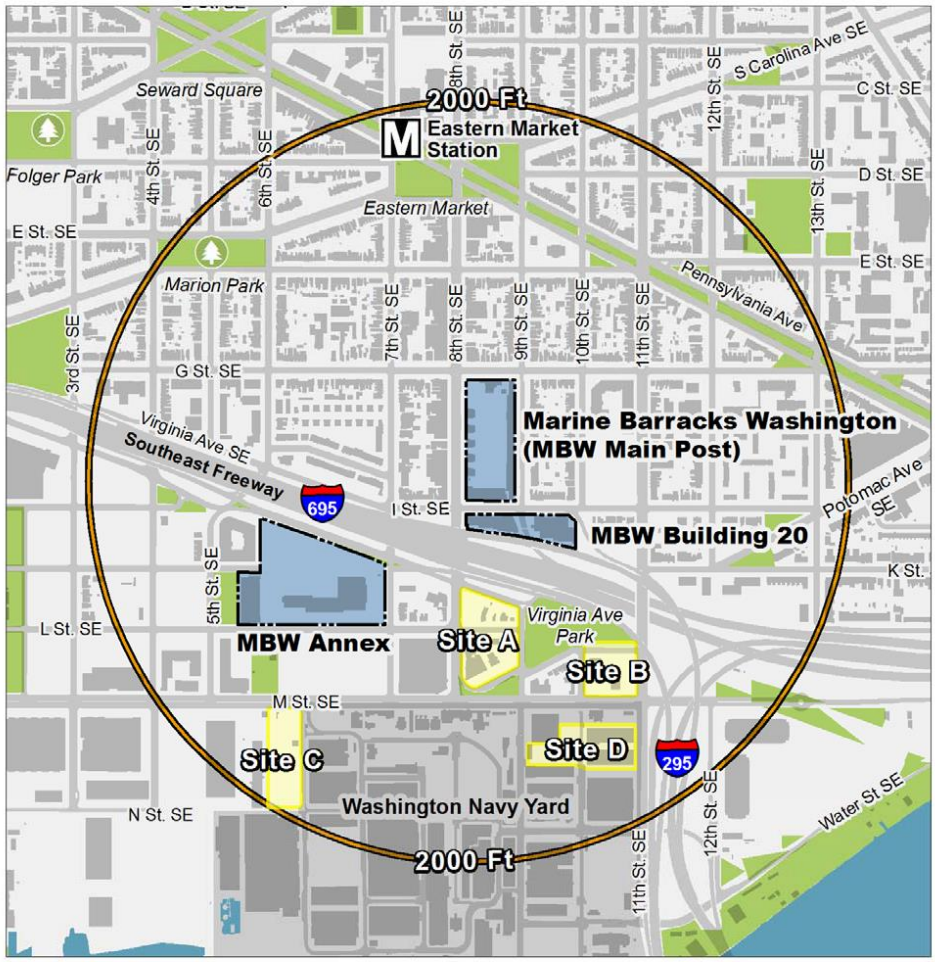

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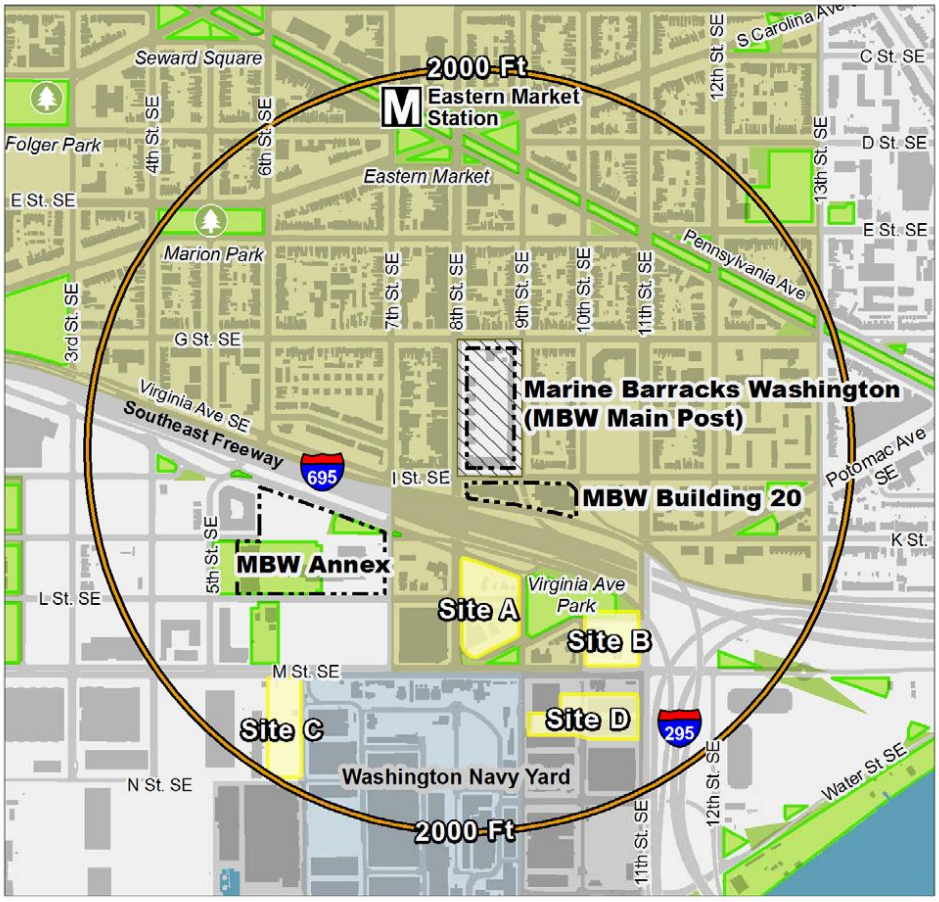

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- National Parks

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Barracks Row Main Street
733 8th Street, SE
2nd Floor
Washington, DC 20003

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR MULTIPLE PROJECTS IN SUPPORT OF MARINE BARRACKS WASHINGTON (MBW)

Dear Sir or Madam:

The Department of the Navy, U.S. Marine Corps, is in the initial stages of preparing an Environmental Impact Statement (EIS) to evaluate the potential impacts that could result from implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C.

The proposed action is to implement several construction, renovation, and repair projects scheduled for completion in the next 5 years to address existing and anticipated facilities deficiencies at MBW. The EIS will also provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed National Environmental Policy Act (NEPA) analysis is not yet available.

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these projects become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The potential environmental impacts of the proposed action will be analyzed in the EIS. In proceeding with the planning of this undertaking, we intend to coordinate our Section 106 National Historic Preservation Act (NHPA) consultation with the development of the EIS pursuant to 36 CFR 800.8, and use the EIS as our primary NHPA consultation documentation. Additionally, to fulfill our responsibilities under 36 CFR 800.3(e) and 800.4(a)(3), we will hold a Section 106 public meeting to solicit input from the public on potential effects on historic properties resulting from the proposed action. The public meeting will be held in conjunction with the EIS public scoping meeting on September 24, 2013 from 5:30 p.m. to 8:30 p.m., at Tyler Elementary School, located at 1001 G St SE, Washington, D.C. 20390. In addition to the public scoping meeting, the Marine Corps will hold an agency scoping meeting from 4:30 p.m. to 5:30 p.m., prior to the public scoping meeting. During that time, the Marine Corps will give a brief presentation of the Proposed Action and will be available for open discussion with agencies regarding issues and concerns.

Pursuant to 36 CFR 800.4(a)(1), the Marine Corps is consulting with the DC Historic Preservation Office to define the Area of Potential Effects (APE) for the proposed action. Once defined, pursuant to 36 CFR 800.4(a)(2), background research and cultural resource surveys will be initiated to identify historic properties within the APE. The results of these identification efforts, in addition to an assessment of the undertaking's effects on any historic properties within the APE, will be the subject of future consultation on this project as part of the Section 106 process.

The Marine Corps invites you to participate in the Section 106 consultation process. For this initial phase of consultation, the Marine Corps respectfully requests that you identify any concerns you may have regarding the Proposed Action and respond by October 7, 2013 so that we may address those concerns and incorporate them into the Draft EIS. In addition, please provide any comments you have regarding our efforts to identify all potential consulting parties and gather information, as outlined in 36 CFR 800.3(f) and 800.4(a)(4).

If you have any questions or need further information on the project, please contact Sherry Frear, the Section 106 consultation coordinator at Headquarters Marine Corps/Marine

Corps Installations Command, at sherry.frear@usmc.mil or (571) 256-2838. Thank you in advance for your input on this important project.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

Enclosures: 1. Notice of Intent to Prepare an EIS
2. Proposed Action and Alternatives Maps
3. Preliminary Draft APE for the Proposed Action

3

Enclosure 1.

Tacoma Convention Center, 1500 Broadway, Tacoma, Washington 98402 on Thursday, October 17, 2013, from 5:00 p.m. to 8:00 p.m.

In addition, an "online scoping meeting" will be continuously hosted on the EIS Internet Web site at *www.millenniumbulkeiswa.gov* for the duration of the scoping period.

b. Potentially significant issues to be analyzed in the EIS include, but are not limited to direct, indirect, and cumulative effects of the project-specific activities proposed within the NEPA scope of analysis as described above on navigation (e.g., vessel traffic and navigational safety); aquatic habitats; aquatic species, including Endangered Species Act-listed species and Washington State species of concern; Tribal treaty rights; wetland and riparian habitat; wildlife; vehicle traffic; cultural, historic, and archeological resources; air and water quality; noise; recreation; land use; and aesthetics.

c. The Corps will consult with the Washington State Historic Preservation Officer and applicable Tribes to comply with the National Historic Preservation Act; the U.S. Fish and Wildlife Service and National Marine Fisheries Service to comply with the Endangered Species Act; the National Marine Fisheries Service to comply with the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act; and applicable Tribes to comply with reserved treaty fishing rights.

d. Preparation of the draft EIS will begin after the close of the scoping period. The draft EIS is currently scheduled to be available for public review and comment by June 2015.

e. A 90-day public review period will be provided for interested parties to review and comment on the draft EIS. Interested parties are encouraged to contact the Corps if they wish to be notified when the draft EIS is issued.

f. All comments received will become part of the administrative record for this project and subject to public release to third-parties, including any personally identifiable information such as name, phone number, and address, included in the comment.

Dated: August 29, 2013.

Bruce A. Estok,

Colonel, Corps of Engineers, District Engineer.

[FR Doc. 2013–21780 Filed 9–5–13; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Intent To Prepare an Environmental Impact Statement for Multiple Projects in Support of the Marine Barracks Washington, District of Columbia

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: Pursuant to Section (102)(2)(c) of the National Environmental Policy Act (NEPA) of 1969, and regulations implemented by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] Parts 1500–1508). Department of the Navy (DoN) NEPA regulations (32 CFR Part 775), and United States Marine Corps (USMC) NEPA directives (Marine Corps Order P5090.2A, changes 1 and 2), the DoN intends to prepare an Environmental Impact Statement (EIS) for several proposed construction, repair, and renovation projects in support of the Marine Barracks Washington (MBW), District of Columbia (DC).

Dates and Addresses: The DoN, USMC, is initiating a 30-day public scoping process to identify community interests and local concerns to be addressed in the EIS, which starts with the publication of this Notice of Intent and ends on October 7, 2013. A public scoping meeting, using an informal open house format, will be held from 5:30 p.m. to 8:30 p.m. on September 24, 2013 at Tyler Elementary School, 1001 G St SE., Washington, DC 20390.

The public is invited to attend this meeting to view project-related displays, speak with USMC representatives, and submit verbal or written comments. All comments regarding the scope of issues that the USMC should consider during EIS preparation must be received prior to October 7, 2013 to be fully considered. Additional information concerning the meeting and the proposed alternatives is available on the EIS Web site at *www.mbweis.com* and will be announced in local and regional newspapers. Please submit requests for special assistance, sign language interpretation for the hearing impaired, or other auxiliary aids needed at the scoping meeting to the MBW Public Affairs Officer, Captain Jack Norton, at 202–433–6682 by September 13, 2013.

Concurrent with the NEPA process, the USMC is initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, one designated area of the room will focus on the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

Submitting Comments: Federal, state, and local agencies and members of the public are encouraged to provide oral and written comments regarding the scope of the EIS, reasonable alternatives, and specific issues or topics of interest. There are three ways comments can be submitted: (1) In person at the public scoping open house meeting, (2) using the project's public Web site comment form at *www.mbweis.com,* or (3) providing written comments through U.S. mail. All comments on the scope of the EIS or any specific concerns regarding potential impacts to the environment should be submitted or postmarked no later than October 1, 2013. Comments submitted by mail should be sent to: Mr. William Sadlon, MBW CIMP EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

The USMC will consider all comments received during the scoping period. A mailing list has been assembled to facilitate preparation of the EIS. This list includes DC and federal agencies with jurisdiction or other interests in the alternatives. In addition, the mailing list includes adjacent property owners and other interested parties, such as historic preservation groups. Those on this list will receive notices and documents related to EIS preparation. Anyone wishing to be added to the mailing list may request to be added at the project Web site *www.mbweis.com* or by contacting the EIS project manager at the address provided below.

FOR FURTHER INFORMATION CONTACT: Mr. William Sadlon, MBW EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

SUPPLEMENTARY INFORMATION: The USMC is preparing an EIS to analyze the potential effects resulting from implementation of several construction, repair, and renovation projects at or proximate to the Marine Barracks Washington scheduled for completion within the next 5 years. The principal project to be analyzed is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. Renovation and improvement projects include interior renovations to Buildings 7 and 8 at the Main Post; improvements to the MBW

Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, pedestrian amenities, and landscaping throughout the installation. The EIS is also intended to provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available. Principal among these projects is the potential reuse of the Building 20 site. Other projects include renovation of Building 9 to accommodate relocation of units currently housed in temporary facilities aboard Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once these actions become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The purpose of the proposed action is to address existing and anticipated facility deficiencies at MBW. The proposed action is needed to better support the functions of the USMC units assigned to the MBW and, in the case of the BEQ Complex replacement project, to meet current requirements for adequate space and mission support functions, space configurations, DoD Quality of Life standards, life safety, sustainability, and energy efficiency, and Anti-Terrorism and Force Protection (AT/FP) requirements. Building 20 cannot be renovated or redesigned within its existing footprint to meet those standards. The renovations for Buildings 7 and 8 are to upgrade the buildings to meet certain AT/FP and life safety standards, improve space utilization, and meet sustainability goals. The improvements to the MBW Annex gate at 7th and K Streets and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation would blend MBW facilities with the neighborhood.

Alternatives Development: The action alternatives analyzed in the EIS regard implementation of specific projects. Sufficient detail is available to fully analyze some proposed projects in the EIS; other proposed projects are analyzed programmatically, with the expectation that additional NEPA analyses will be conducted when more detail is available.

The primary project to be analyzed in the EIS is the BEQ Complex replacement project, which includes the acquisition of land on which to construct the replacement facilities. The pre-NEPA agency and public engagement effort referred to as the Community Integrated Master Plan process that preceded this EIS effort provided a foundation for the required rigorous exploration of a reasonable range of alternative sites to meet the purpose and need with respect to the BEQ Complex replacement project. The following screening criteria were used to further refine and narrow the range of alternative sites for the BEQ Complex project.

The location must be within a 10-minute "reasonable walking distance" of the MBW Main Post Main Gate Entrance (defined as an approximately 2,000-foot radius of the Main Post Main Gate Entrance). The site must meet the minimum developable area requirements, including setback distances to meet AT/FP standards, while also complying with applicable laws governing height restrictions. The space requirement for the BEQ Complex is 191,405 square feet (SF), which includes supporting facilities and parking. Any site chosen must not be a site that currently provides or is planned to provide public services for DC residents, to include public housing, education, or public recreation services.

Based on the siting criteria, four potential sites have been identified for possible acquisition and development of facilities to meet the BEQ Complex replacement requirements. The four sites are defined in terms of squares and adjacent streets, as applicable. A "square" is the unit of land defined by the DC Surveyor that normally consists of a single city block and contains recorded tax lots.

Site A is a privately-owned 3.0-acre site composed of Square 929, Square 930, and L Street between 6th and 9th Streets. Site B is a privately-owned 1.8-acre site that encompasses Square 976 and a segment of L Street between 10th and 11th Streets. Site C comprises a portion of Square 853 just west of Washington Navy Yard in the Southeast Federal Center. The federally-owned 2.1-acre site is bound by M Street SE to the north and Tingey Street to the south. Site D, owned by the U.S. Navy, is approximately 2.2 acres and located on the northeast corner of Washington Navy Yard. It is bound by 11th Street SE to the east and M Street SE to the north and comprises portions of Squares 977 and 953 within the Washington Navy Yard boundary.

Implementation of the Site A alternative would require acquisition of both squares and closure of and construction on L Street between 8th and 9th Streets. Implementation of the 191,405 SF BEQ Complex at Site B would require the vehicular closure of L Street between 10th and 11th Streets and utilize the closed road right-of-way and a portion of existing Virginia Avenue Park open space buffer to satisfy vehicular AT/FP standoff requirements (while also not affecting use of the park). Implementation of Site C would allow for reduced AT/FP setbacks, given its adjacency to the Washington Navy Yard. If the Site D alternative was implemented, the BEQ Complex would be constructed entirely within the Washington Navy Yard boundary.

The No-Action Alternative for the BEQ Complex project is to continue to utilize and maintain the existing inadequate Building 20 BEQ Complex. The No-Action Alternative does not meet the purpose and need for the action, but must be analyzed as the baseline against which the impacts associated with action alternatives will be evaluated.

Alternatives for the renovation and improvement projects to be analyzed in detail in the EIS consist of alternative space layouts and functional space assignments for MBW units. In some cases, the alternatives may be limited to implementing the project or taking no action. The No Action Alternative for the renovation and improvement projects would be to not implement interior renovations, which would result in continued inefficient space utilization functional layouts and energy systems, life safety issues, and hindering MBW's ability to meet sustainability goals.

Environmental Compliance: The EIS would evaluate potential environmental effects associated with each of the alternatives for each of the analyzed projects on the following: safety, land use, recreation, air quality, socioeconomics and environmental justice, water resources, noise, cultural resources, natural resources, traffic/transportation, hazardous materials and waste, and utilities. Relevant and reasonable measures that could avoid or mitigate adverse environmental effects will also be analyzed. Additionally, the USMC will undertake consultations required by the National Historic Preservation Act and any other applicable laws or regulations.

Schedule: This Notice of Intent is the first phase of the EIS process and announces the 30-day public comment period to identify community concerns and local issues that should be addressed in the EIS. The next phase occurs when a Notice of Availability (NOA) is published in the **Federal Register** and local media to publicly announce the release of the Draft EIS in Summer 2014. A 45-day public comment period for the Draft EIS will commence upon publication of the NOA in the **Federal Register**. The USMC will consider and respond to all comments

received on the Draft EIS when preparing the Final EIS. The USMC intends to issue the Final EIS in Winter 2014/2015, at which time an NOA would be published in the **Federal Register** and local media.

A Record of Decision is anticipated in early 2015.

Dated: August 29, 2013.

P.A. Richelmi,

Lieutenant, Office of the Judge Advocate General, U.S. Navy, Alternate Federal Register Liaison Officer.

[FR Doc. 2013–21713 Filed 9–5–13; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF EDUCATION

[Docket No. ED–2013–ICCD–0118]

Agency Information Collection Activities; Comment Request; Application for Approval To Participate in Federal Student Financial Aid Programs

AGENCY: Federal Student Aid (FSA), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 *et seq.*), ED is proposing an extension of an existing information collection.

DATES: Interested persons are invited to submit comments on or before November 5, 2013.

ADDRESSES: Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting Docket ID number ED–2013–ICCD–0118 or via postal mail, commercial delivery, or hand delivery. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Room, 2E103 Washington, DC 20202–4537.

FOR FURTHER INFORMATION CONTACT: For questions related to collection activities or burden, please call Kate Mullan, 202–401–0563 or electronically mail *ICDocketMgr@ed.gov*. Please do not send comments here.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Application for Approval to Participate in Federal Student Financial Aid Programs

OMB Control Number: 1845–0012

Type of Review: An extension of an existing information collection.

Respondents/Affected Public: Private Sector, State, Local, or Tribal Governments

Total Estimated Number of Annual Responses: 7,246

Total Estimated Number of Annual Burden Hours: 24,352

Abstract: The Higher Education Act of 1965, as amended requires postsecondary institutions to complete and submit this application as a condition of eligibility for any of the Title IV student financial assistance programs and for the other postsecondary programs authorize by the HEA. The institution must submit the form (1) Initially when it first seeks to become eligible for the Title IV programs; (2) when its program participation agreement expires (recertification); (3) when it changes ownership, merges, or changes structure, (4) to be reinstated to participate in the Title IV programs, (5) to notify the Department when it makes certain changes, e.g. name or address; and (5) if it wishes to have a new program (outside its current scope) or new location approved for Title IV purposes.

Kate Mullan,

Acting Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management.

[FR Doc. 2013–21675 Filed 9–5–13; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Privacy Act of 1974; Computer Matching Program Between the Department of Education (ED) and the Social Security Administration (SSA)

AGENCY: Department of Education.

ACTION: Notice.

SUMMARY: Pursuant to the Computer Matching and Privacy Protection Act of 1988, the Computer Matching and Privacy Protections Amendments of 1990, and Office of Management and Budget (OMB) guidance on the conduct of computer matching programs, notice is hereby given of the renewal of the computer matching program between the ED (recipient agency), and the SSA (source agency). This renewal of the computer matching program will become effective as explained in paragraph 5.

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974 (5 U.S.C. 552a), as amended, OMB Final Guidance Interpreting the Provisions of Public Law 100–503, the Computer Matching and Privacy Protection Act of 1988, published in the **Federal Register** on June 19, 1989 (54 FR 25818), and OMB Circular No. A–130, Transmittal Memorandum #4, Management of Federal Information Resources (November 28, 2000), we provide the following information:

1. *Names of Participating Agencies.*

The U.S. Department of Education and the Social Security Administration.

2. *Purpose of the Match.*

The purpose of this matching program between ED and SSA is to assist the Secretary of Education with verification of immigration status and Social Security numbers (SSNs) under 20 U.S.C. 1091(g) and (p). SSA will verify the issuance of an SSN to, and will confirm the citizenship status of, those students and parents applying for financial assistance programs authorized under title IV of the Higher Education Act of 1965, as amended (HEA). Verification of this information by SSA will help ED satisfy its obligation to ensure that individuals applying for financial assistance meet

Enclosure 2. Figures of Proposed Action

MBW Planned Project Sites, Location Map

Marine Barracks Washington, DC

Source: DC GIS Data Clearinghouse/Catalog

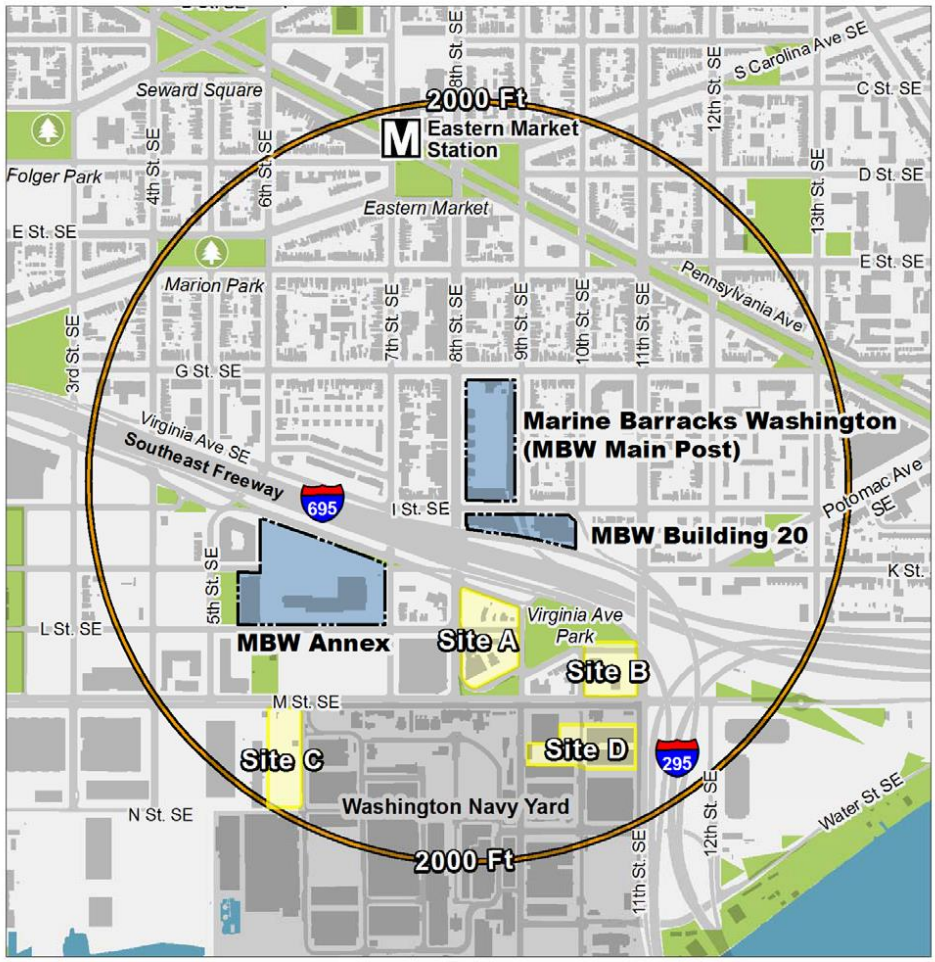
Key

MBW Projects
- 2014-2018
- Beyond 2018

MBW Sites

Park

8



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

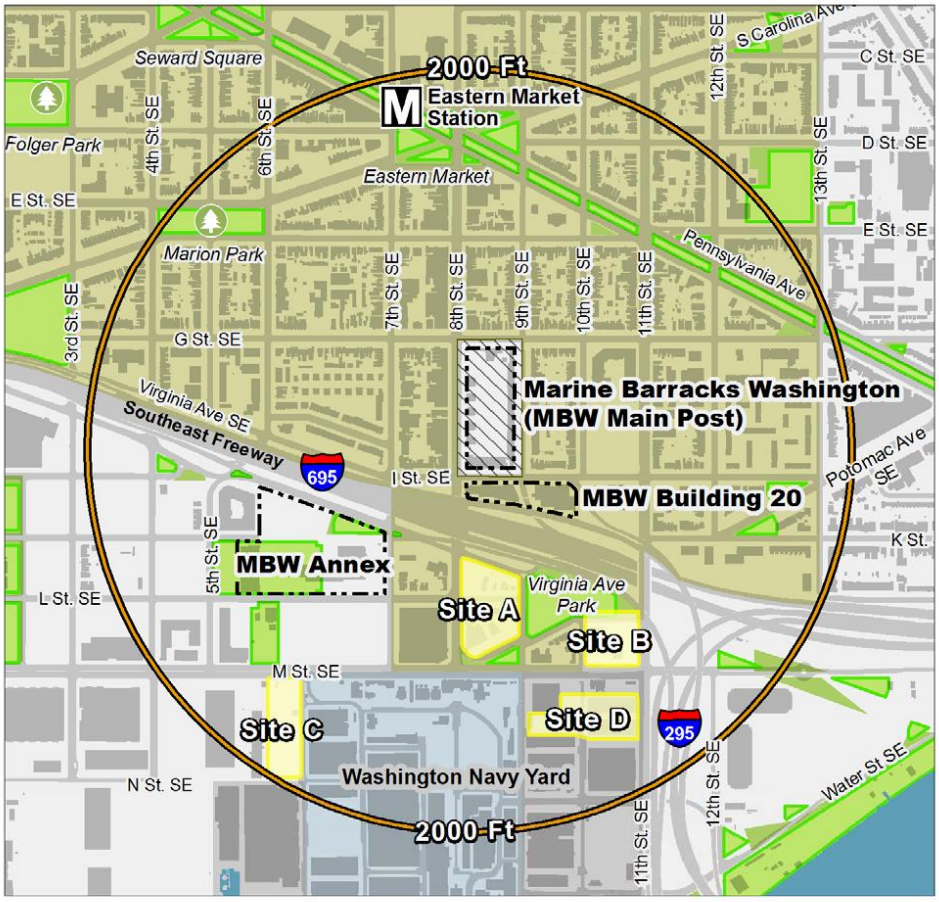
0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- 2000 Ft Buffer from MBW Main Post
- Buildings
- Roads
- Parks
- WaterPly

Enclosure 3. Preliminary Draft APE for the Proposed Action



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- Preliminary Draft Area of Potential Effects (APE)
- Buildings
- Roads

Historic Districts

- Capitol Hill
- Marine Barracks (National Historic Landmark)
- Washington Navy Yard (National Historic Landmark)
- L'Enfant Reservations
- National Parks

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

ANC 6B
921 Pennsylvania Avenue, SE
Suite 305
Washington, DC 20003

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR MULTIPLE PROJECTS IN SUPPORT OF MARINE BARRACKS WASHINGTON (MBW)

Dear Sir or Madam:

The Department of the Navy, U.S. Marine Corps, is in the initial stages of preparing an Environmental Impact Statement (EIS) to evaluate the potential impacts that could result from implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C.

The proposed action is to implement several construction, renovation, and repair projects scheduled for completion in the next 5 years to address existing and anticipated facilities deficiencies at MBW. The EIS will also provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed National Environmental Policy Act (NEPA) analysis is not yet available.

The principal project to be analyzed in detail is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. This project was the focus of a pre-NEPA agency and public engagement process referred to as the Community Integrated Master Plan (CIMP) process. Other projects to be analyzed in detail include interior renovations to Buildings 7 and 8 at the MBW Main Post; improvements to the MBW Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation that would blend MBW facilities with the neighborhood. At this time, it is anticipated the EIS would evaluate four action alternatives for the BEQ Complex project, as well as the No Action Alternative. The attached enclosures depict the locations of the existing MBW properties and potential BEQ Complex sites.

Other longer-term (2018 or later) projects to be analyzed programmatically involve reuse of Building 20 or the Building 20 site and interior renovations to Building 9 to accommodate relocation of functions from the Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once

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these projects become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The potential environmental impacts of the proposed action will be analyzed in the EIS. In proceeding with the planning of this undertaking, we intend to coordinate our Section 106 National Historic Preservation Act (NHPA) consultation with the development of the EIS pursuant to 36 CFR 800.8, and use the EIS as our primary NHPA consultation documentation. Additionally, to fulfill our responsibilities under 36 CFR 800.3(e) and 800.4(a)(3), we will hold a Section 106 public meeting to solicit input from the public on potential effects on historic properties resulting from the proposed action. The public meeting will be held in conjunction with the EIS public scoping meeting on September 24, 2013 from 5:30 p.m. to 8:30 p.m., at Tyler Elementary School, located at 1001 G St SE, Washington, D.C. 20390. In addition to the public scoping meeting, the Marine Corps will hold an agency scoping meeting from 4:30 p.m. to 5:30 p.m., prior to the public scoping meeting. During that time, the Marine Corps will give a brief presentation of the Proposed Action and will be available for open discussion with agencies regarding issues and concerns.

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The Marine Corps invites you to participate in the Section 106 consultation process. For this initial phase of consultation, the Marine Corps respectfully requests that you identify any concerns you may have regarding the Proposed Action and respond by October 7, 2013 so that we may address those concerns and incorporate them into the Draft EIS. In addition, please provide any comments you have regarding our efforts to identify all potential consulting parties and gather information, as outlined in 36 CFR 800.3(f) and 800.4(a)(4).

If you have any questions or need further information on the project, please contact Sherry Frear, the Section 106 consultation coordinator at Headquarters Marine Corps/Marine

Corps Installations Command, at sherry.frear@usmc.mil or (571) 256-2838. Thank you in advance for your input on this important project.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

Enclosures: 1. Notice of Intent to Prepare an EIS
2. Proposed Action and Alternatives Maps
3. Preliminary Draft APE for the Proposed Action

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Enclosure 1.

Tacoma Convention Center, 1500 Broadway, Tacoma, Washington 98402 on Thursday, October 17, 2013, from 5:00 p.m. to 8:00 p.m.

In addition, an "online scoping meeting" will be continuously hosted on the EIS Internet Web site at *www.millenniumbulkeiswa.gov* for the duration of the scoping period.

b. Potentially significant issues to be analyzed in the EIS include, but are not limited to direct, indirect, and cumulative effects of the project-specific activities proposed within the NEPA scope of analysis as described above on navigation (e.g., vessel traffic and navigational safety); aquatic habitats; aquatic species, including Endangered Species Act-listed species and Washington State species of concern; Tribal treaty rights; wetland and riparian habitat; wildlife; vehicle traffic; cultural, historic, and archeological resources; air and water quality; noise; recreation; land use; and aesthetics.

c. The Corps will consult with the Washington State Historic Preservation Officer and applicable Tribes to comply with the National Historic Preservation Act; the U.S. Fish and Wildlife Service and National Marine Fisheries Service to comply with the Endangered Species Act; the National Marine Fisheries Service to comply with the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act; and applicable Tribes to comply with reserved treaty fishing rights.

d. Preparation of the draft EIS will begin after the close of the scoping period. The draft EIS is currently scheduled to be available for public review and comment by June 2015.

e. A 90-day public review period will be provided for interested parties to review and comment on the draft EIS. Interested parties are encouraged to contact the Corps if they wish to be notified when the draft EIS is issued.

f. All comments received will become part of the administrative record for this project and subject to public release to third-parties, including any personally identifiable information such as name, phone number, and address, included in the comment.

Dated: August 29, 2013.

Bruce A. Estok,

Colonel, Corps of Engineers, District Engineer.

[FR Doc. 2013–21780 Filed 9–5–13; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Intent To Prepare an Environmental Impact Statement for Multiple Projects in Support of the Marine Barracks Washington, District of Columbia

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: Pursuant to Section (102)(2)(c) of the National Environmental Policy Act (NEPA) of 1969, and regulations implemented by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] Parts 1500–1508). Department of the Navy (DoN) NEPA regulations (32 CFR Part 775), and United States Marine Corps (USMC) NEPA directives (Marine Corps Order P5090.2A, changes 1 and 2), the DoN intends to prepare an Environmental Impact Statement (EIS) for several proposed construction, repair, and renovation projects in support of the Marine Barracks Washington (MBW), District of Columbia (DC).

Dates and Addresses: The DoN, USMC, is initiating a 30-day public scoping process to identify community interests and local concerns to be addressed in the EIS, which starts with the publication of this Notice of Intent and ends on October 7, 2013. A public scoping meeting, using an informal open house format, will be held from 5:30 p.m. to 8:30 p.m. on September 24, 2013 at Tyler Elementary School, 1001 G St SE., Washington, DC 20390.

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Concurrent with the NEPA process, the USMC is initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, one designated area of the room will focus on the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

Submitting Comments: Federal, state, and local agencies and members of the public are encouraged to provide oral and written comments regarding the scope of the EIS, reasonable alternatives, and specific issues or topics of interest. There are three ways comments can be submitted: (1) In person at the public scoping open house meeting, (2) using the project's public Web site comment form at *www.mbweis.com,* or (3) providing written comments through U.S. mail. All comments on the scope of the EIS or any specific concerns regarding potential impacts to the environment should be submitted or postmarked no later than October 1, 2013. Comments submitted by mail should be sent to: Mr. William Sadlon, MBW CIMP EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

The USMC will consider all comments received during the scoping period. A mailing list has been assembled to facilitate preparation of the EIS. This list includes DC and federal agencies with jurisdiction or other interests in the alternatives. In addition, the mailing list includes adjacent property owners and other interested parties, such as historic preservation groups. Those on this list will receive notices and documents related to EIS preparation. Anyone wishing to be added to the mailing list may request to be added at the project Web site *www.mbweis.com* or by contacting the EIS project manager at the address provided below.

FOR FURTHER INFORMATION CONTACT: Mr. William Sadlon, MBW EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

SUPPLEMENTARY INFORMATION: The USMC is preparing an EIS to analyze the potential effects resulting from implementation of several construction, repair, and renovation projects at or proximate to the Marine Barracks Washington scheduled for completion within the next 5 years. The principal project to be analyzed is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. Renovation and improvement projects include interior renovations to Buildings 7 and 8 at the Main Post; improvements to the MBW

Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, pedestrian amenities, and landscaping throughout the installation. The EIS is also intended to provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available. Principal among these projects is the potential reuse of the Building 20 site. Other projects include renovation of Building 9 to accommodate relocation of units currently housed in temporary facilities aboard Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once these actions become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The purpose of the proposed action is to address existing and anticipated facility deficiencies at MBW. The proposed action is needed to better support the functions of the USMC units assigned to the MBW and, in the case of the BEQ Complex replacement project, to meet current requirements for adequate space and mission support functions, space configurations, DoD Quality of Life standards, life safety, sustainability, and energy efficiency, and Anti-Terrorism and Force Protection (AT/FP) requirements. Building 20 cannot be renovated or redesigned within its existing footprint to meet those standards. The renovations for Buildings 7 and 8 are to upgrade the buildings to meet certain AT/FP and life safety standards, improve space utilization, and meet sustainability goals. The improvements to the MBW Annex gate at 7th and K Streets and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation would blend MBW facilities with the neighborhood.

Alternatives Development: The action alternatives analyzed in the EIS regard implementation of specific projects. Sufficient detail is available to fully analyze some proposed projects in the EIS; other proposed projects are analyzed programmatically, with the expectation that additional NEPA analyses will be conducted when more detail is available.

The primary project to be analyzed in the EIS is the BEQ Complex replacement project, which includes the acquisition of land on which to construct the replacement facilities. The pre-NEPA agency and public engagement effort referred to as the Community Integrated Master Plan process that preceded this EIS effort provided a foundation for the required rigorous exploration of a reasonable range of alternative sites to meet the purpose and need with respect to the BEQ Complex replacement project. The following screening criteria were used to further refine and narrow the range of alternative sites for the BEQ Complex project.

The location must be within a 10-minute "reasonable walking distance" of the MBW Main Post Main Gate Entrance (defined as an approximately 2,000-foot radius of the Main Post Main Gate Entrance). The site must meet the minimum developable area requirements, including setback distances to meet AT/FP standards, while also complying with applicable laws governing height restrictions. The space requirement for the BEQ Complex is 191,405 square feet (SF), which includes supporting facilities and parking. Any site chosen must not be a site that currently provides or is planned to provide public services for DC residents, to include public housing, education, or public recreation services.

Based on the siting criteria, four potential sites have been identified for possible acquisition and development of facilities to meet the BEQ Complex replacement requirements. The four sites are defined in terms of squares and adjacent streets, as applicable. A "square" is the unit of land defined by the DC Surveyor that normally consists of a single city block and contains recorded tax lots.

Site A is a privately-owned 3.0-acre site composed of Square 929, Square 930, and L Street between 6th and 9th Streets. Site B is a privately-owned 1.8-acre site that encompasses Square 976 and a segment of L Street between 10th and 11th Streets. Site C comprises a portion of Square 853 just west of Washington Navy Yard in the Southeast Federal Center. The federally-owned 2.1-acre site is bound by M Street SE to the north and Tingey Street to the south. Site D, owned by the U.S. Navy, is approximately 2.2 acres and located on the northeast corner of Washington Navy Yard. It is bound by 11th Street SE to the east and M Street SE to the north and comprises portions of Squares 977 and 953 within the Washington Navy Yard boundary.

Implementation of the Site A alternative would require acquisition of both squares and closure of and construction on L Street between 8th and 9th Streets. Implementation of the 191,405 SF BEQ Complex at Site B would require the vehicular closure of L Street between 10th and 11th Streets and utilize the closed road right-of-way and a portion of existing Virginia Avenue Park open space buffer to satisfy vehicular AT/FP standoff requirements (while also not affecting use of the park). Implementation of Site C would allow for reduced AT/FP setbacks, given its adjacency to the Washington Navy Yard. If the Site D alternative was implemented, the BEQ Complex would be constructed entirely within the Washington Navy Yard boundary.

The No-Action Alternative for the BEQ Complex project is to continue to utilize and maintain the existing inadequate Building 20 BEQ Complex. The No-Action Alternative does not meet the purpose and need for the action, but must be analyzed as the baseline against which the impacts associated with action alternatives will be evaluated.

Alternatives for the renovation and improvement projects to be analyzed in detail in the EIS consist of alternative space layouts and functional space assignments for MBW units. In some cases, the alternatives may be limited to implementing the project or taking no action. The No Action Alternative for the renovation and improvement projects would be to not implement interior renovations, which would result in continued inefficient space utilization functional layouts and energy systems, life safety issues, and hindering MBW's ability to meet sustainability goals.

Environmental Compliance: The EIS would evaluate potential environmental effects associated with each of the alternatives for each of the analyzed projects on the following: safety, land use, recreation, air quality, socioeconomics and environmental justice, water resources, noise, cultural resources, natural resources, traffic/transportation, hazardous materials and waste, and utilities. Relevant and reasonable measures that could avoid or mitigate adverse environmental effects will also be analyzed. Additionally, the USMC will undertake consultations required by the National Historic Preservation Act and any other applicable laws or regulations.

Schedule: This Notice of Intent is the first phase of the EIS process and announces the 30-day public comment period to identify community concerns and local issues that should be addressed in the EIS. The next phase occurs when a Notice of Availability (NOA) is published in the **Federal Register** and local media to publicly announce the release of the Draft EIS in Summer 2014. A 45-day public comment period for the Draft EIS will commence upon publication of the NOA in the **Federal Register**. The USMC will consider and respond to all comments

received on the Draft EIS when preparing the Final EIS. The USMC intends to issue the Final EIS in Winter 2014/2015, at which time an NOA would be published in the **Federal Register** and local media.

A Record of Decision is anticipated in early 2015.

Dated: August 29, 2013.

P.A. Richelmi,

Lieutenant, Office of the Judge Advocate General, U.S. Navy, Alternate Federal Register Liaison Officer.

[FR Doc. 2013–21713 Filed 9–5–13; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF EDUCATION

[Docket No. ED–2013–ICCD–0118]

Agency Information Collection Activities; Comment Request; Application for Approval To Participate in Federal Student Financial Aid Programs

AGENCY: Federal Student Aid (FSA), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 *et seq.*), ED is proposing an extension of an existing information collection.

DATES: Interested persons are invited to submit comments on or before November 5, 2013.

ADDRESSES: Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting Docket ID number ED–2013–ICCD–0118 or via postal mail, commercial delivery, or hand delivery. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Room, 2E103 Washington, DC 20202–4537.

FOR FURTHER INFORMATION CONTACT: For questions related to collection activities or burden, please call Kate Mullan, 202–401–0563 or electronically mail *ICDocketMgr@ed.gov*. Please do not send comments here.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Application for Approval to Participate in Federal Student Financial Aid Programs

OMB Control Number: 1845–0012

Type of Review: An extension of an existing information collection.

Respondents/Affected Public: Private Sector, State, Local, or Tribal Governments

Total Estimated Number of Annual Responses: 7,246

Total Estimated Number of Annual Burden Hours: 24,352

Abstract: The Higher Education Act of 1965, as amended requires postsecondary institutions to complete and submit this application as a condition of eligibility for any of the Title IV student financial assistance programs and for the other postsecondary programs authorize by the HEA. The institution must submit the form (1) Initially when it first seeks to become eligible for the Title IV programs; (2) when its program participation agreement expires (recertification); (3) when it changes ownership, merges, or changes structure, (4) to be reinstated to participate in the Title IV programs, (5) to notify the Department when it makes certain changes, e.g. name or address; and (5) if it wishes to have a new program (outside its current scope) or new location approved for Title IV purposes.

Kate Mullan,

Acting Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management.

[FR Doc. 2013–21675 Filed 9–5–13; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Privacy Act of 1974; Computer Matching Program Between the Department of Education (ED) and the Social Security Administration (SSA)

AGENCY: Department of Education.

ACTION: Notice.

SUMMARY: Pursuant to the Computer Matching and Privacy Protection Act of 1988, the Computer Matching and Privacy Protections Amendments of 1990, and Office of Management and Budget (OMB) guidance on the conduct of computer matching programs, notice is hereby given of the renewal of the computer matching program between the ED (recipient agency), and the SSA (source agency). This renewal of the computer matching program will become effective as explained in paragraph 5.

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974 (5 U.S.C. 552a), as amended, OMB Final Guidance Interpreting the Provisions of Public Law 100–503, the Computer Matching and Privacy Protection Act of 1988, published in the **Federal Register** on June 19, 1989 (54 FR 25818), and OMB Circular No. A–130, Transmittal Memorandum #4, Management of Federal Information Resources (November 28, 2000), we provide the following information:

1. *Names of Participating Agencies.*

The U.S. Department of Education and the Social Security Administration.

2. *Purpose of the Match.*

The purpose of this matching program between ED and SSA is to assist the Secretary of Education with verification of immigration status and Social Security numbers (SSNs) under 20 U.S.C. 1091(g) and (p). SSA will verify the issuance of an SSN to, and will confirm the citizenship status of, those students and parents applying for financial assistance programs authorized under title IV of the Higher Education Act of 1965, as amended (HEA). Verification of this information by SSA will help ED satisfy its obligation to ensure that individuals applying for financial assistance meet

Enclosure 2. Figures of Proposed Action

MBW Planned Project Sites, Location Map

Marine Barracks Washington, DC

Source: DC GIS Data Clearinghouse/Catalog

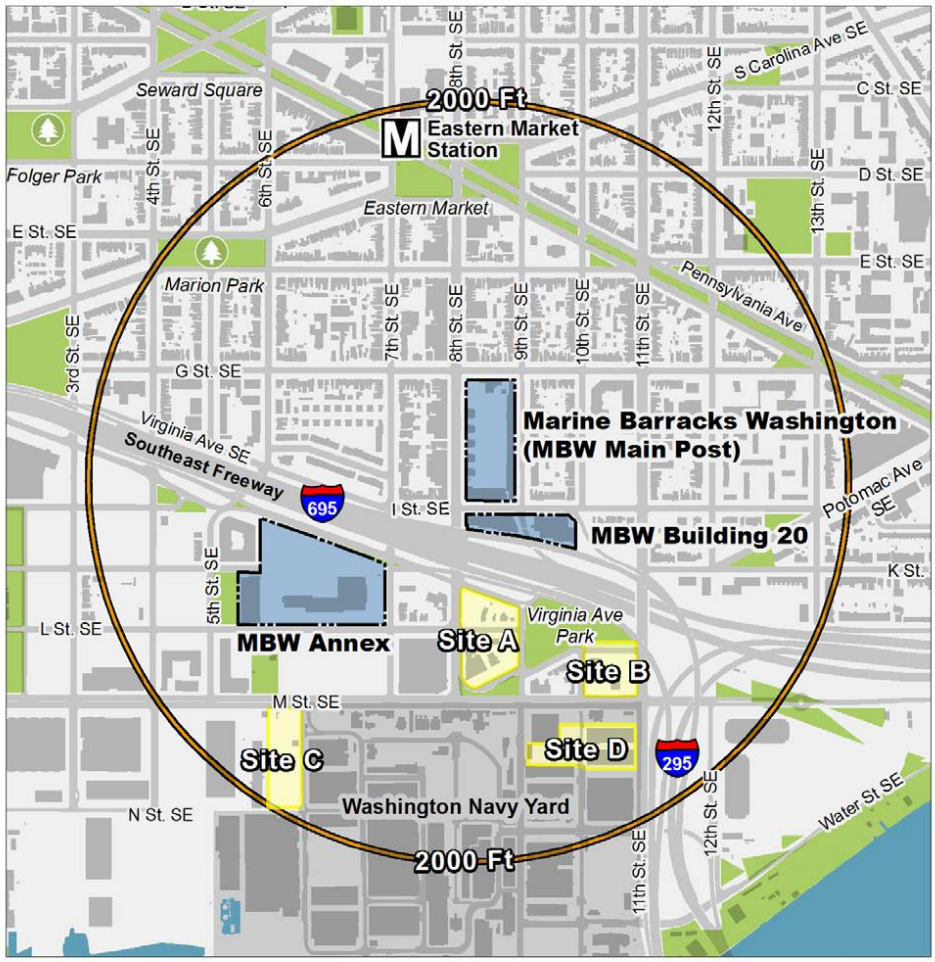
Key

MBW Projects
- 2014-2018
- Beyond 2018

MBW Sites

Park

8



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

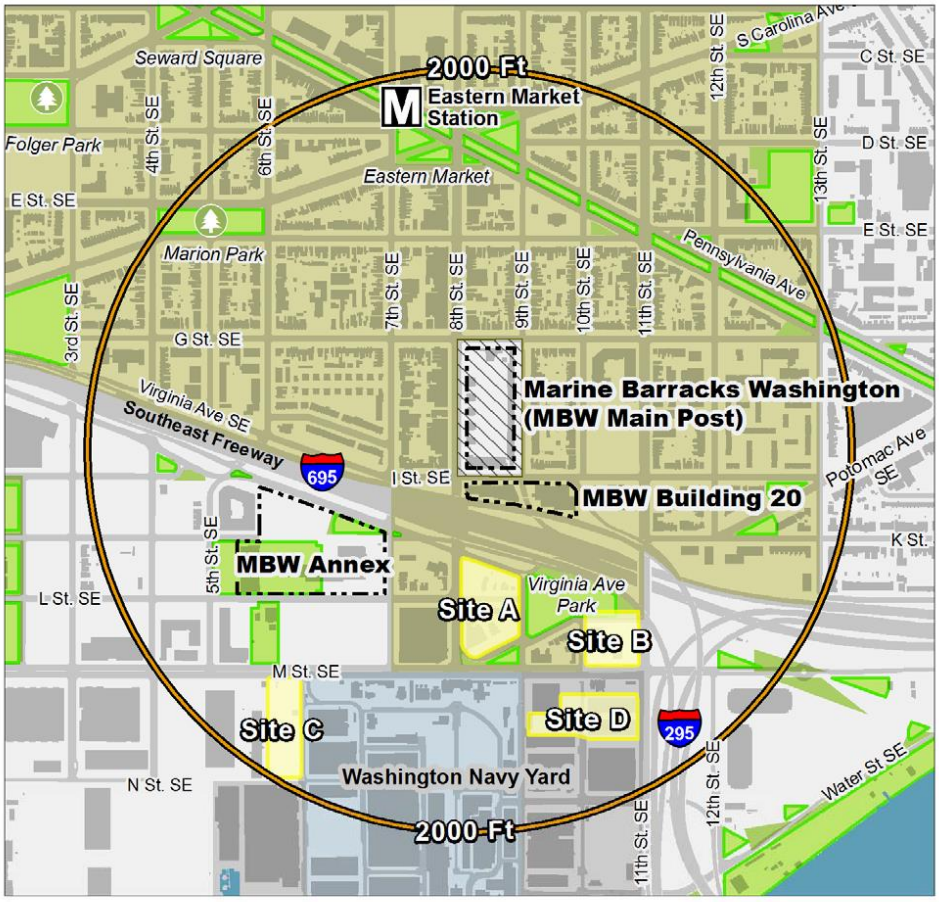
0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- 2000 Ft Buffer from MBW Main Post
- Buildings
- Roads
- Parks
- WaterPly

Enclosure 3. Preliminary Draft APE for the Proposed Action



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- Preliminary Draft Area of Potential Effects (APE)
- Buildings
- Roads

Historic Districts

- Capitol Hill
- Marine Barracks (National Historic Landmark)
- Washington Navy Yard (National Historic Landmark)
- L'Enfant Reservations
- National Parks

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

ANC 6D
1101 4th Street, SW, Suite W130
Washington, DC 20024

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR MULTIPLE PROJECTS IN SUPPORT OF MARINE BARRACKS WASHINGTON (MBW)

Dear Sir or Madam:

The Department of the Navy, U.S. Marine Corps, is in the initial stages of preparing an Environmental Impact Statement (EIS) to evaluate the potential impacts that could result from implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C.

The proposed action is to implement several construction, renovation, and repair projects scheduled for completion in the next 5 years to address existing and anticipated facilities deficiencies at MBW. The EIS will also provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed National Environmental Policy Act (NEPA) analysis is not yet available.

The principal project to be analyzed in detail is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. This project was the focus of a pre-NEPA agency and public engagement process referred to as the Community Integrated Master Plan (CIMP) process. Other projects to be analyzed in detail include interior renovations to Buildings 7 and 8 at the MBW Main Post; improvements to the MBW Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation that would blend MBW facilities with the neighborhood. At this time, it is anticipated the EIS would evaluate four action alternatives for the BEQ Complex project, as well as the No Action Alternative. The attached enclosures depict the locations of the existing MBW properties and potential BEQ Complex sites.

Other longer-term (2018 or later) projects to be analyzed programmatically involve reuse of Building 20 or the Building 20 site and interior renovations to Building 9 to accommodate relocation of functions from the Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once

1

these projects become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

The potential environmental impacts of the proposed action will be analyzed in the EIS. In proceeding with the planning of this undertaking, we intend to coordinate our Section 106 National Historic Preservation Act (NHPA) consultation with the development of the EIS pursuant to 36 CFR 800.8, and use the EIS as our primary NHPA consultation documentation. Additionally, to fulfill our responsibilities under 36 CFR 800.3(e) and 800.4(a)(3), we will hold a Section 106 public meeting to solicit input from the public on potential effects on historic properties resulting from the proposed action. The public meeting will be held in conjunction with the EIS public scoping meeting on September 24, 2013 from 5:30 p.m. to 8:30 p.m., at Tyler Elementary School, located at 1001 G St SE, Washington, D.C. 20390. In addition to the public scoping meeting, the Marine Corps will hold an agency scoping meeting from 4:30 p.m. to 5:30 p.m., prior to the public scoping meeting. During that time, the Marine Corps will give a brief presentation of the Proposed Action and will be available for open discussion with agencies regarding issues and concerns.

Pursuant to 36 CFR 800.4(a)(1), the Marine Corps is consulting with the DC Historic Preservation Office to define the Area of Potential Effects (APE) for the proposed action. Once defined, pursuant to 36 CFR 800.4(a)(2), background research and cultural resource surveys will be initiated to identify historic properties within the APE. The results of these identification efforts, in addition to an assessment of the undertaking's effects on any historic properties within the APE, will be the subject of future consultation on this project as part of the Section 106 process.

The Marine Corps invites you to participate in the Section 106 consultation process. For this initial phase of consultation, the Marine Corps respectfully requests that you identify any concerns you may have regarding the Proposed Action and respond by October 7, 2013 so that we may address those concerns and incorporate them into the Draft EIS. In addition, please provide any comments you have regarding our efforts to identify all potential consulting parties and gather information, as outlined in 36 CFR 800.3(f) and 800.4(a)(4).

If you have any questions or need further information on the project, please contact Sherry Frear, the Section 106 consultation coordinator at Headquarters Marine Corps/Marine

Corps Installations Command, at sherry.frear@usmc.mil or (571) 256-2838. Thank you in advance for your input on this important project.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

Enclosures: 1. Notice of Intent to Prepare an EIS
2. Proposed Action and Alternatives Maps
3. Preliminary Draft APE for the Proposed Action

3

Enclosure 1.

4

Tacoma Convention Center, 1500 Broadway, Tacoma, Washington 98402 on Thursday, October 17, 2013, from 5:00 p.m. to 8:00 p.m.

In addition, an ''online scoping meeting'' will be continuously hosted on the EIS Internet Web site at *www.millenniumbulkeiswa.gov* for the duration of the scoping period.

b. Potentially significant issues to be analyzed in the EIS include, but are not limited to direct, indirect, and cumulative effects of the project-specific activities proposed within the NEPA scope of analysis as described above on navigation (e.g., vessel traffic and navigational safety); aquatic habitats; aquatic species, including Endangered Species Act-listed species and Washington State species of concern; Tribal treaty rights; wetland and riparian habitat; wildlife; vehicle traffic; cultural, historic, and archeological resources; air and water quality; noise; recreation; land use; and aesthetics.

c. The Corps will consult with the Washington State Historic Preservation Officer and applicable Tribes to comply with the National Historic Preservation Act; the U.S. Fish and Wildlife Service and National Marine Fisheries Service to comply with the Endangered Species Act; the National Marine Fisheries Service to comply with the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act; and applicable Tribes to comply with reserved treaty fishing rights.

d. Preparation of the draft EIS will begin after the close of the scoping period. The draft EIS is currently scheduled to be available for public review and comment by June 2015.

e. A 90-day public review period will be provided for interested parties to review and comment on the draft EIS. Interested parties are encouraged to contact the Corps if they wish to be notified when the draft EIS is issued.

f. All comments received will become part of the administrative record for this project and subject to public release to third-parties, including any personally identifiable information such as name, phone number, and address, included in the comment.

Dated: August 29, 2013.

Bruce A. Estok,

Colonel, Corps of Engineers, District Engineer.

[FR Doc. 2013–21780 Filed 9–5–13; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Intent To Prepare an Environmental Impact Statement for Multiple Projects in Support of the Marine Barracks Washington, District of Columbia

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: Pursuant to Section (102)(2)(c) of the National Environmental Policy Act (NEPA) of 1969, and regulations implemented by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] Parts 1500–1508), Department of the Navy (DoN) NEPA regulations (32 CFR Part 775), and United States Marine Corps (USMC) NEPA directives (Marine Corps Order P5090.2A, changes 1 and 2), the DoN intends to prepare an Environmental Impact Statement (EIS) for several proposed construction, repair, and renovation projects in support of the Marine Barracks Washington (MBW), District of Columbia (DC).

Dates and Addresses: The DoN, USMC, is initiating a 30-day public scoping process to identify community interests and local concerns to be addressed in the EIS, which starts with the publication of this Notice of Intent and ends on October 7, 2013. A public scoping meeting, using an informal open house format, will be held from 5:30 p.m. to 8:30 p.m. on September 24, 2013 at Tyler Elementary School, 1001 G St SE., Washington, DC 20390.

The public is invited to attend this meeting to view project-related displays, speak with USMC representatives, and submit verbal or written comments. All comments regarding the scope of issues that the USMC should consider during EIS preparation must be received prior to October 7, 2013 to be fully considered. Additional information concerning the meeting and the proposed alternatives is available on the EIS Web site at *www.mbweis.com* and will be announced in local and regional newspapers. Please submit requests for special assistance, sign language interpretation for the hearing impaired, or other auxiliary aids needed at the scoping meeting to the MBW Public Affairs Officer, Captain Jack Norton, at 202–433–6682 by September 13, 2013.

Concurrent with the NEPA process, the USMC is initiating National Historic Preservation Act Section 106 Consultation to determine the potential effects of the proposed action on historic properties. During the scoping meeting, one designated area of the room will focus on the Section 106 process and solicit public input on the identification of historic properties and potential effects of the proposed action on historic properties.

Submitting Comments: Federal, state, and local agencies and members of the public are encouraged to provide oral and written comments regarding the scope of the EIS, reasonable alternatives, and specific issues or topics of interest. There are three ways comments can be submitted: (1) In person at the public scoping open house meeting, (2) using the project's public Web site comment form at *www.mbweis.com,* or (3) providing written comments through U.S. mail. All comments on the scope of the EIS or any specific concerns regarding potential impacts to the environment should be submitted or postmarked no later than October 1, 2013. Comments submitted by mail should be sent to: Mr. William Sadlon, MBW CIMP EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

The USMC will consider all comments received during the scoping period. A mailing list has been assembled to facilitate preparation of the EIS. This list includes DC and federal agencies with jurisdiction or other interests in the alternatives. In addition, the mailing list includes adjacent property owners and other interested parties, such as historic preservation groups. Those on this list will receive notices and documents related to EIS preparation. Anyone wishing to be added to the mailing list may request to be added at the project Web site *www.mbweis.com* or by contacting the EIS project manager at the address provided below.

FOR FURTHER INFORMATION CONTACT: Mr. William Sadlon, MBW EIS Project Manager, 1314 Harwood St. SE., Bldg. 212, Washington Navy Yard, DC 20374–5018.

SUPPLEMENTARY INFORMATION: The USMC is preparing an EIS to analyze the potential effects resulting from implementation of several construction, repair, and renovation projects at or proximate to the Marine Barracks Washington scheduled for completion within the next 5 years. The principal project to be analyzed is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking) currently housed in Building 20. Renovation and improvement projects include interior renovations to Buildings 7 and 8 at the Main Post; improvements to the MBW

Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, pedestrian amenities, and landscaping throughout the installation. The EIS is also intended to provide a programmatic analysis of the potential effects of several additional projects scheduled to occur in 2018 or later for which information sufficient to conduct detailed NEPA analysis is not yet available. Principal among these projects is the potential reuse of the Building 20 site. Other projects include renovation of Building 9 to accommodate relocation of units currently housed in temporary facilities aboard Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once these actions become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

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Alternatives Development: The action alternatives analyzed in the EIS regard implementation of specific projects. Sufficient detail is available to fully analyze some proposed projects in the EIS; other proposed projects are analyzed programmatically, with the expectation that additional NEPA analyses will be conducted when more detail is available.

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The location must be within a 10-minute "reasonable walking distance" of the MBW Main Post Main Gate Entrance (defined as an approximately 2,000-foot radius of the Main Post Main Gate Entrance). The site must meet the minimum developable area requirements, including setback distances to meet AT/FP standards, while also complying with applicable laws governing height restrictions. The space requirement for the BEQ Complex is 191,405 square feet (SF), which includes supporting facilities and parking. Any site chosen must not be a site that currently provides or is planned to provide public services for DC residents, to include public housing, education, or public recreation services.

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The No-Action Alternative for the BEQ Complex project is to continue to utilize and maintain the existing inadequate Building 20 BEQ Complex. The No-Action Alternative does not meet the purpose and need for the action, but must be analyzed as the baseline against which the impacts associated with action alternatives will be evaluated.

Alternatives for the renovation and improvement projects to be analyzed in detail in the EIS consist of alternative space layouts and functional space assignments for MBW units. In some cases, the alternatives may be limited to implementing the project or taking no action. The No Action Alternative for the renovation and improvement projects would be to not implement interior renovations, which would result in continued inefficient space utilization functional layouts and energy systems, life safety issues, and hindering MBW's ability to meet sustainability goals.

Environmental Compliance: The EIS would evaluate potential environmental effects associated with each of the alternatives for each of the analyzed projects on the following: safety, land use, recreation, air quality, socioeconomics and environmental justice, water resources, noise, cultural resources, natural resources, traffic/transportation, hazardous materials and waste, and utilities. Relevant and reasonable measures that could avoid or mitigate adverse environmental effects will also be analyzed. Additionally, the USMC will undertake consultations required by the National Historic Preservation Act and any other applicable laws or regulations.

Schedule: This Notice of Intent is the first phase of the EIS process and announces the 30-day public comment period to identify community concerns and local issues that should be addressed in the EIS. The next phase occurs when a Notice of Availability (NOA) is published in the **Federal Register** and local media to publicly announce the release of the Draft EIS in Summer 2014. A 45-day public comment period for the Draft EIS will commence upon publication of the NOA in the **Federal Register**. The USMC will consider and respond to all comments

received on the Draft EIS when preparing the Final EIS. The USMC intends to issue the Final EIS in Winter 2014/2015, at which time an NOA would be published in the **Federal Register** and local media.

A Record of Decision is anticipated in early 2015.

Dated: August 29, 2013.

P.A. Richelmi,

Lieutenant, Office of the Judge Advocate General, U.S. Navy, Alternate Federal Register Liaison Officer.

[FR Doc. 2013–21713 Filed 9–5–13; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF EDUCATION

[Docket No. ED–2013–ICCD–0118]

Agency Information Collection Activities; Comment Request; Application for Approval To Participate in Federal Student Financial Aid Programs

AGENCY: Federal Student Aid (FSA), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 *et seq.*), ED is proposing an extension of an existing information collection.

DATES: Interested persons are invited to submit comments on or before November 5, 2013.

ADDRESSES: Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting Docket ID number ED–2013–ICCD–0118 or via postal mail, commercial delivery, or hand delivery. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Room, 2E103 Washington, DC 20202–4537.

FOR FURTHER INFORMATION CONTACT: For questions related to collection activities or burden, please call Kate Mullan, 202–401–0563 or electronically mail *ICDocketMgr@ed.gov.* Please do not send comments here.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Application for Approval to Participate in Federal Student Financial Aid Programs

OMB Control Number: 1845–0012

Type of Review: An extension of an existing information collection.

Respondents/Affected Public: Private Sector, State, Local, or Tribal Governments

Total Estimated Number of Annual Responses: 7,246

Total Estimated Number of Annual Burden Hours: 24,352

Abstract: The Higher Education Act of 1965, as amended requires postsecondary institutions to complete and submit this application as a condition of eligibility for any of the Title IV student financial assistance programs and for the other postsecondary programs authorize by the HEA. The institution must submit the form (1) Initially when it first seeks to become eligible for the Title IV programs; (2) when its program participation agreement expires (recertification); (3) when it changes ownership, merges, or changes structure, (4) to be reinstated to participate in the Title IV programs, (5) to notify the Department when it makes certain changes, e.g. name or address; and (5) if it wishes to have a new program (outside its current scope) or new location approved for Title IV purposes.

Kate Mullan,

Acting Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management.

[FR Doc. 2013–21675 Filed 9–5–13; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Privacy Act of 1974; Computer Matching Program Between the Department of Education (ED) and the Social Security Administration (SSA)

AGENCY: Department of Education.

ACTION: Notice.

SUMMARY: Pursuant to the Computer Matching and Privacy Protection Act of 1988, the Computer Matching and Privacy Protections Amendments of 1990, and Office of Management and Budget (OMB) guidance on the conduct of computer matching programs, notice is hereby given of the renewal of the computer matching program between the ED (recipient agency), and the SSA (source agency). This renewal of the computer matching program will become effective as explained in paragraph 5.

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974 (5 U.S.C. 552a), as amended, OMB Final Guidance Interpreting the Provisions of Public Law 100–503, the Computer Matching and Privacy Protection Act of 1988, published in the **Federal Register** on June 19, 1989 (54 FR 25818), and OMB Circular No. A–130, Transmittal Memorandum #4, Management of Federal Information Resources (November 28, 2000), we provide the following information:

1. *Names of Participating Agencies.*

The U.S. Department of Education and the Social Security Administration.

2. *Purpose of the Match.*

The purpose of this matching program between ED and SSA is to assist the Secretary of Education with verification of immigration status and Social Security numbers (SSNs) under 20 U.S.C. 1091(g) and (p). SSA will verify the issuance of an SSN to, and will confirm the citizenship status of, those students and parents applying for financial assistance programs authorized under title IV of the Higher Education Act of 1965, as amended (HEA). Verification of this information by SSA will help ED satisfy its obligation to ensure that individuals applying for financial assistance meet

Enclosure 2. Figures of Proposed Action

MBW Planned Project Sites, Location Map

Marine Barracks Washington, DC

Source: DC GIS Data Clearinghouse/Catalog

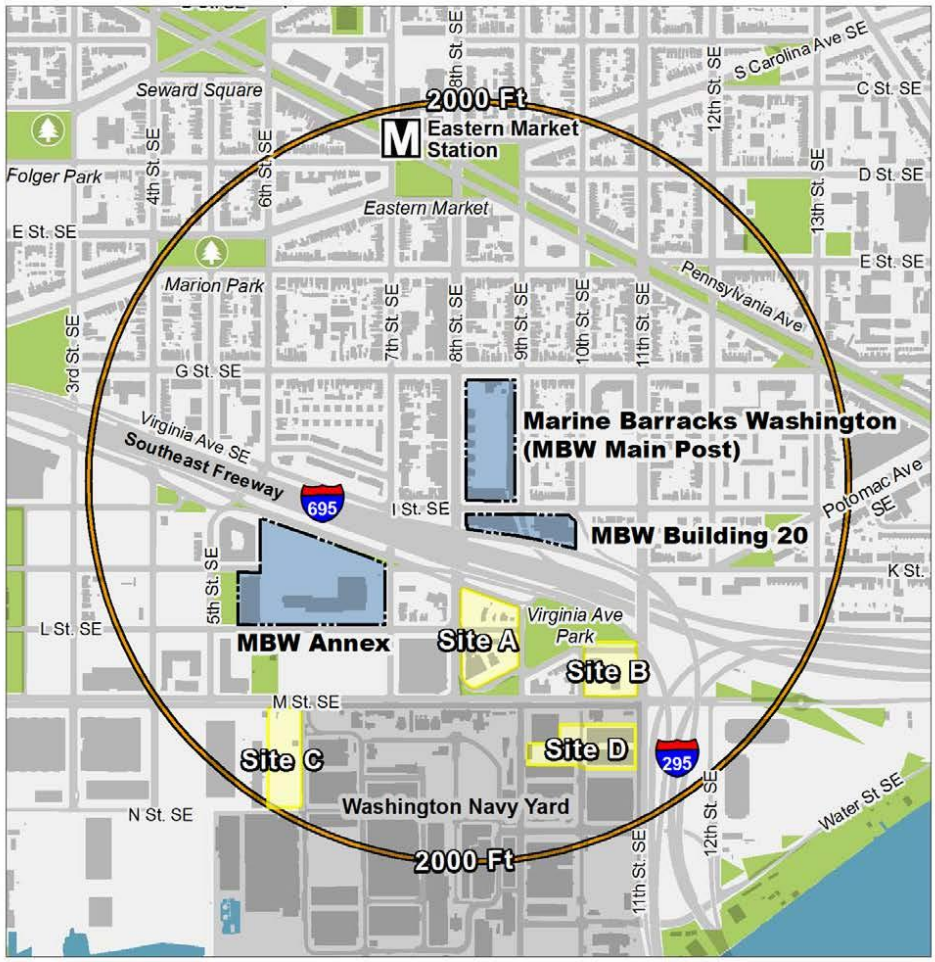
Key

MBW Projects
- 2014-2018
- Beyond 2018

MBW Sites

Park

8



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

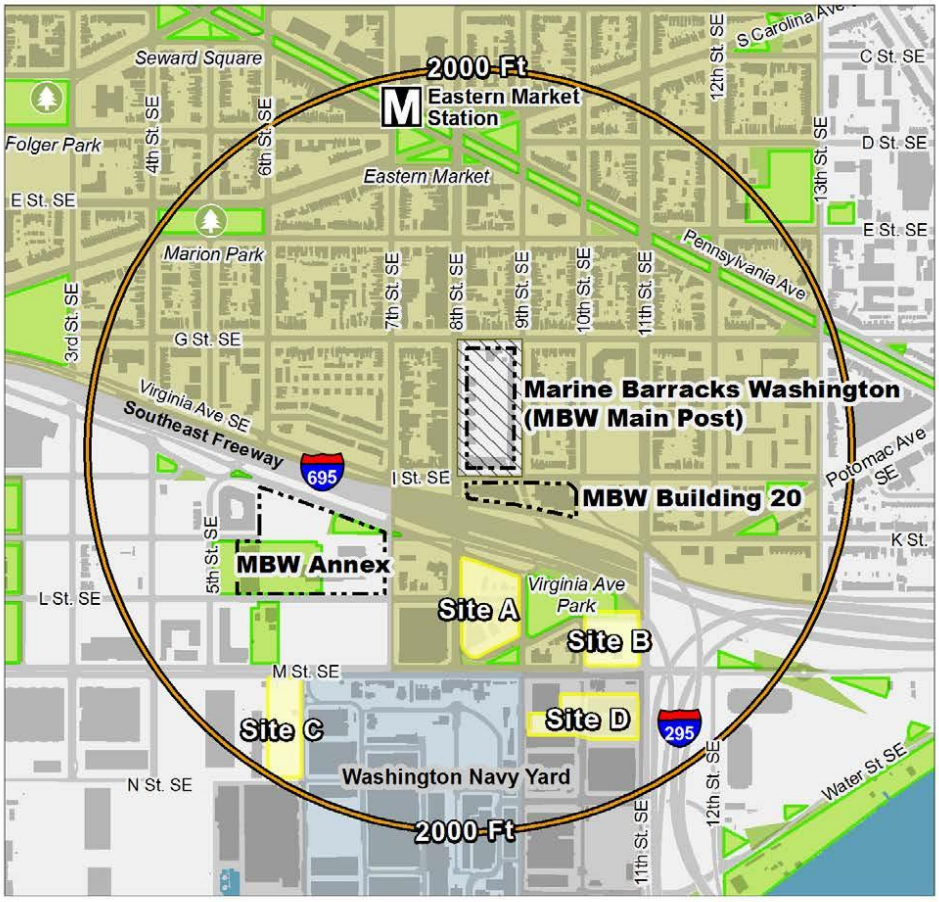
0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- 2000 Ft Buffer from MBW Main Post
- Buildings
- Roads
- Parks
- WaterPly

Enclosure 3. Preliminary Draft APE for the Proposed Action



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

0 250 500 1,000 Feet

Source: DC GIS Data Clearinghouse/Catalog

Key

- Marine Barracks Washington Sites
- Alternative BEQ Complex Sites
- Preliminary Draft Area of Potential Effects (APE)
- Buildings
- Roads

Historic Districts

- Capitol Hill
- Marine Barracks (National Historic Landmark)
- Washington Navy Yard (National Historic Landmark)
- L'Enfant Reservations
- National Parks

UNITED STATES MARINE CORPS
MARINE BARRACKS
8th & I STREETS S. E.
WASHINGTON, D. C. 20390-5000

IN REPLY REFER TO:
1000
CO
6 Sept 13

Mr. David Maloney
State Historic Preservation Officer
Historic Preservation Office
1100 4th Street SW, Suite E650
Washington, DC 20024

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR MULTIPLE PROJECTS IN SUPPORT OF MARINE BARRACKS WASHINGTON (MBW)

Dear Mr. Maloney:

The Department of the Navy, U.S. Marine Corps, is in the initial stages of preparing an Environmental Impact Statement (EIS) to evaluate the potential impacts that could result from implementation of multiple projects in support of Marine Barracks Washington (MBW) in southeast Washington, D.C. (Enclosure 1). This analysis is being conducted in accordance with the National Environmental Policy Act of 1969 (NEPA) and this undertaking and its effects are being considered under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and implementing regulations 36 CFR 800. The Navy is writing to inform you about the project and initiate consultation regarding the project Area of Potential Effects (APE) per 36 CFR 800.4(a)(1).

The primary project to be analyzed in the EIS is a land acquisition and construction project to replace a Bachelor Enlisted Quarters (BEQ) Complex (including support facilities and parking) currently housed in MBW's Building 20. Other projects to be analyzed in detail include interior renovations to Buildings 7 and 8 at the MBW Main Post; improvements to the MBW Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, and pedestrian amenities throughout the installation that would blend MBW facilities with the neighborhood. At this time, it is anticipated the EIS would evaluate four action alternatives for the BEQ Complex project, as well as the No Action Alternative. The attached enclosures depict the locations of the existing MBW properties and potential BEQ Complex sites.

Other longer-term (2018 or later) projects to be analyzed programmatically involve reuse of Building 20 or the Building 20 site and interior renovations to Building 9 to accommodate relocation of functions from the Washington Navy Yard, as well as some additional landscaping and maintenance projects. Once

these projects become sufficiently ripe for detailed analysis, additional NEPA analysis will be completed.

In accordance with 36 CFR 800.4(a)(1), an APE needs to be established in consultation with your office. Based on the potential for direct effects to archaeological and architectural resources by the proposed action, the Marine Corps has tentatively identified an APE that comprises a 2,000-foot radius centered on the Main Post Main Gate Entrance, as shown in Enclosure 3.

The potential environmental effects of the proposed action will be analyzed in the EIS. Once the APE is defined, the Marine Corps will review site files to determine whether any of the parcels being considered have been previously surveyed and, if so, if there are any historic properties present. The Marine Corps will also contact the land owners of the parcels to request permission to conduct archaeological and historic structure surveys. The results of these identification efforts, in addition to an assessment of effects on historic properties by the preferred alternative once determined, will be the subject of future consultation with your office on this project.

Additionally, to fulfill our responsibilities under 36 CFR 800.3(e) and 800.4(a)(3), we will hold a Section 106 public meeting to solicit input from the public on potential effects on historic properties resulting from the proposed action. The public meeting will be held in conjunction with the EIS public scoping meeting on September 24, 2013 from 5:30 p.m. to 8:30 p.m., at Tyler Elementary School, located at 1001 G St SE, Washington, D.C. 20390. In addition to the public scoping meeting, the Marine Corps will hold an agency scoping meeting from 4:30 p.m. to 5:30 p.m., prior to the public scoping meeting. During that time, the Marine Corps will give a brief presentation of the undertaking and will be available for open discussion with agencies regarding issues and concerns.

We look forward to working with your office as this undertaking moves forward. If you have any questions or comments, please contact Sherry Frear, the Section 106 consultation coordinator at Headquarters Marine Corps/Marine Corps Installations Command, at sherry.frear@usmc.mil or (571) 256-2838.

Sincerely,

C. G. CABANISS
Colonel, U.S. Marine Corps
Marine Barracks Washington, D.C.

Enclosures:
1. Regional Location Marine Barracks Washington
2. Proposed Action and Alternatives Maps
3. Preliminary Draft APE for the Proposed Action

3

Enclosure 1. MBW Vicinity

MBW PROPERTIES & LOCATION MAP

Enclosure 2. Figures of Proposed Action

MBW Planned Project Sites, Location Map

Marine Barracks Washington, DC

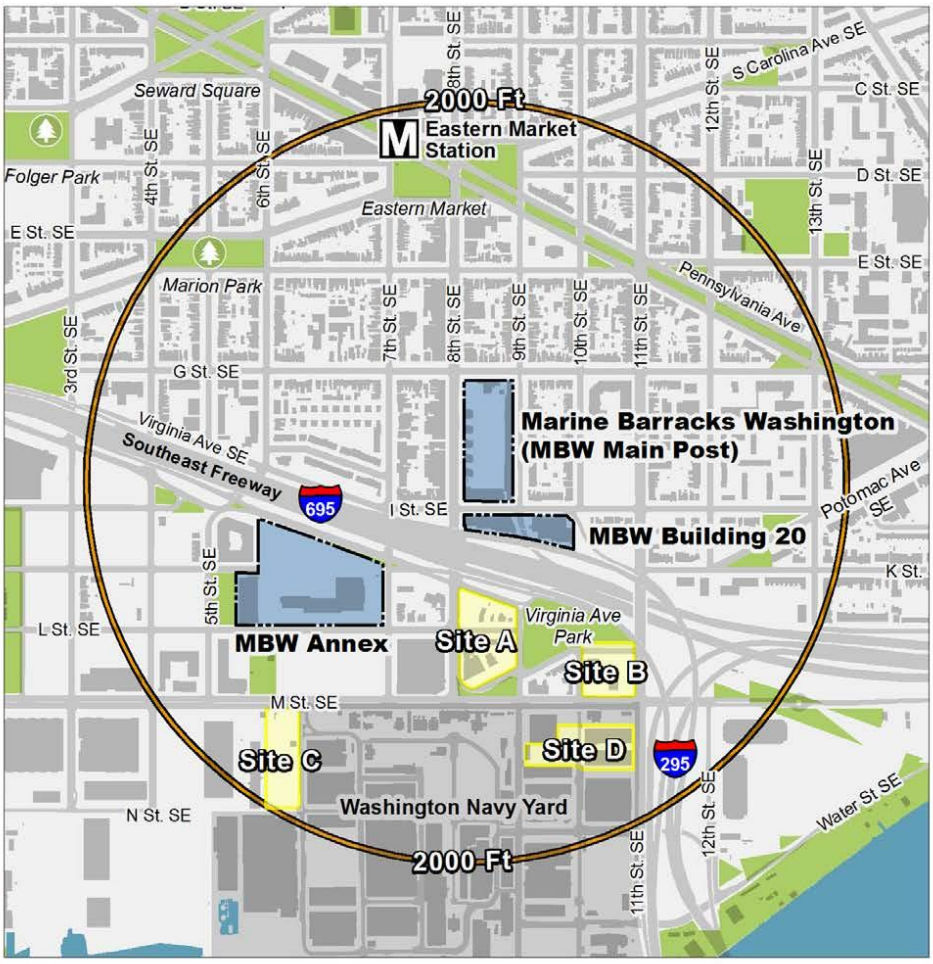
Source: DC GIS Data Clearinghouse/Catalog

Key

MBW Projects

- 2014-2018
- Beyond 2018

- MBW Sites
- Park



MBW Properties and Alternative BEQ Complex Sites

Marine Barracks Washington (MBW), DC

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Source: DC GIS Data Clearinghouse/Catalog

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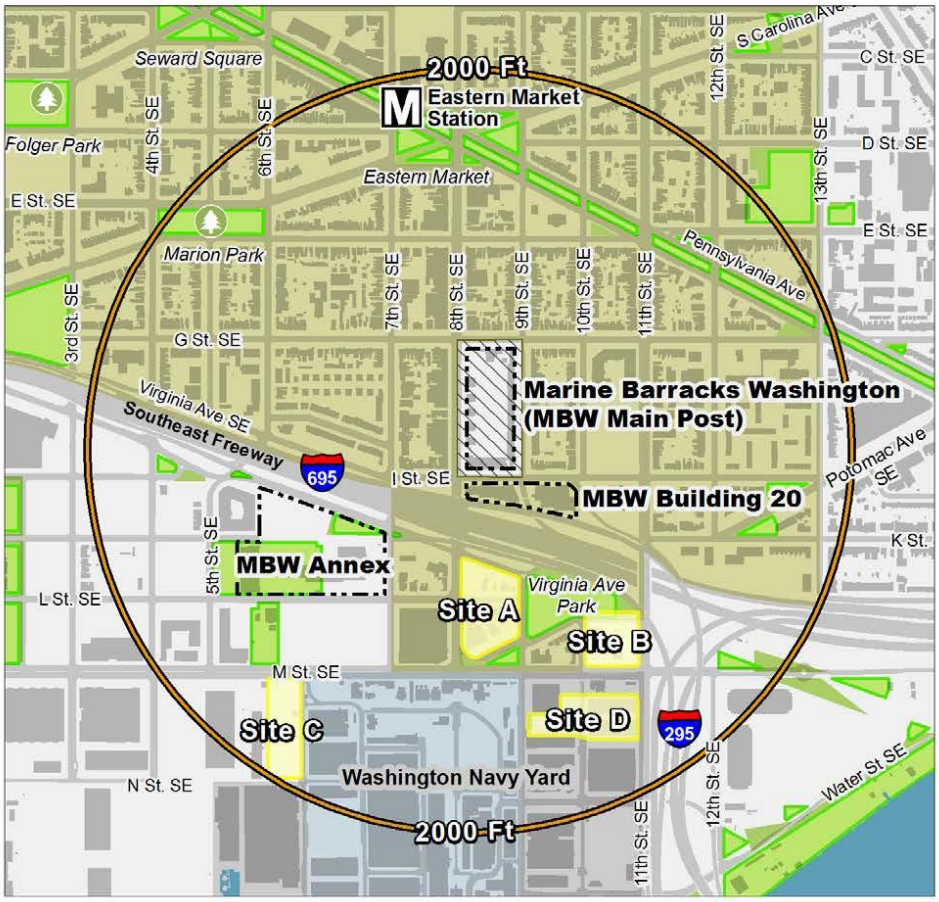

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- Roads

Historic Districts

- Capitol Hill
- Marine Barracks (National Historic Landmark)
- Washington Navy Yard (National Historic Landmark)
- L'Enfant Reservations
- National Parks

APPENDIX C

TRANSPORTATION IMPACT ANALYSIS

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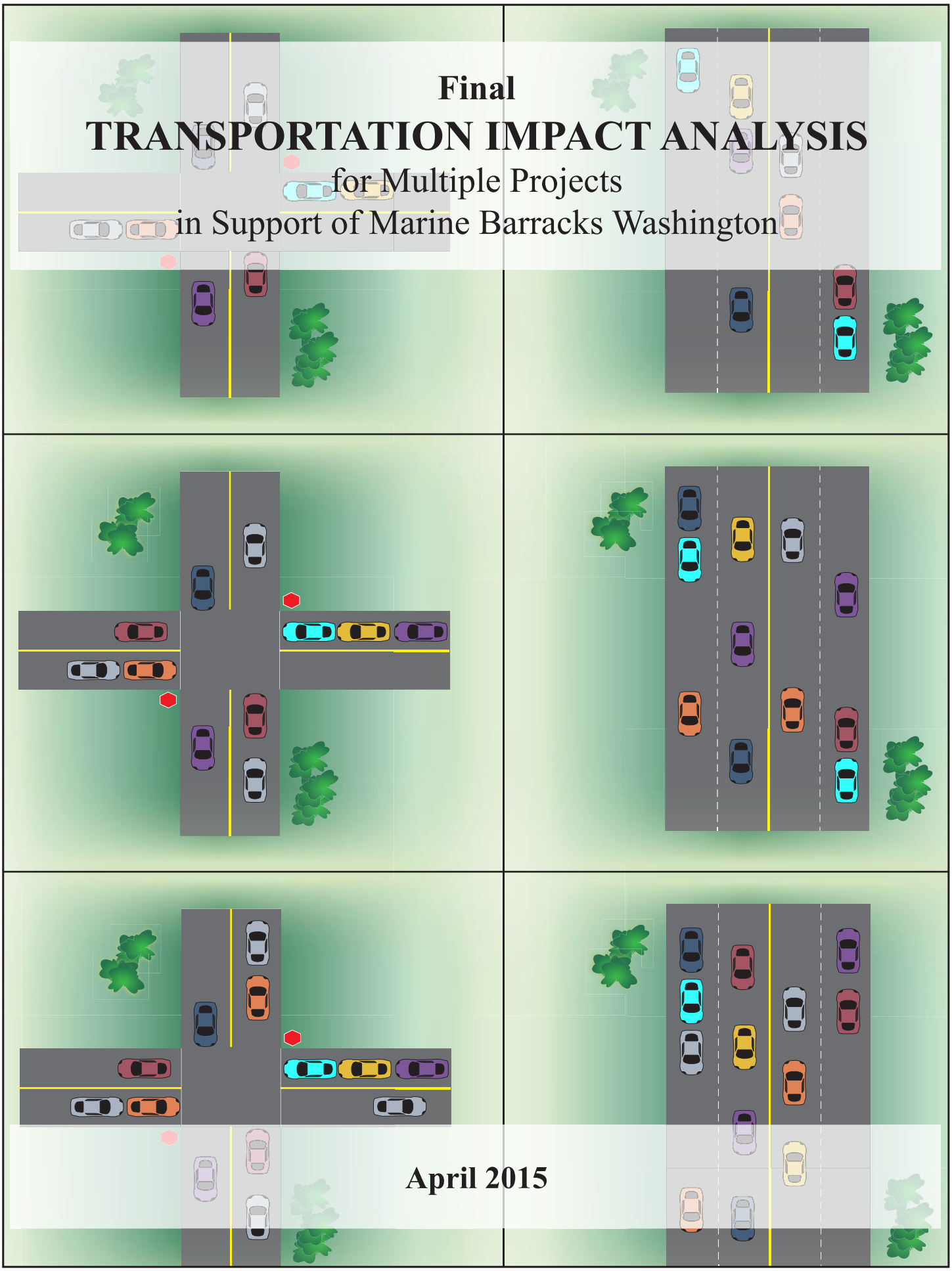

Final
TRANSPORTATION IMPACT ANALYSIS
for Multiple Projects
in Support of Marine Barracks Washington

April 2015

Acronyms and Abbreviations

BEQ	Bachelor Enlisted Quarters
DDOT	District of Columbia Department of Transportation
DC	District of Columbia
du	dwelling units
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
FY	fiscal year
HCM	Highway Capacity Manual
I	Interstate
ITE	Institute of Transportation Engineers
ksf	thousands of square feet
LOS	Level of Service
MBW	Marine Barracks Washington
MCI	Marine Corps Institute
NAVFAC	Naval Facilities Engineering Command
NCPC	National Capital Planning Commission
NEPA	National Environmental Policy Act
ROI	region of influence
ROW	right-of-way
TIA	Transportation Impact Analysis
TMP	Transportation Management Program
TRB	Transportation Research Board
WMATA	Washington Metropolitan Area Transit Authority
WNY	Washington Navy Yard

EXECUTIVE SUMMARY

The Proposed Action is to implement the following projects at or proximate to Marine Barracks Washington (MBW) anticipated to occur within an approximately 5-year planning horizon from the publication of the Record of Decision (anticipated early 2016) in order to meet the purpose of and need for the Proposed Action described in the Environmental Impact Statement (EIS) for Multiple Projects in Support of Marine Barracks Washington (i.e., the "MBW EIS").

- The Bachelor Enlisted Quarters (BEQ) Complex replacement project: This project, which is the principal project to be analyzed in this TIA, includes 1) securing a site (acquiring land or establishing a tenant site on Department of Defense property) and 2) constructing a 191,045 square foot BEQ Complex (including supporting facilities and parking) to replace the existing Building 20 BEQ Complex.
- Main Post renovation projects: These projects include interior renovations to Building 7 at the Main Post.
- Project to foster integrated communities: These projects include improvements to the MBW Annex gate at 7th and K Streets and improvements to building facades, fencing, infrastructure, pedestrian amenities, and landscaping throughout the installation that are consistent with the neighborhood context.

Because the transportation impacts associated with the Main Post renovation projects and the project to foster integrated communities would be localized and limited to the duration of construction, this TIA focuses on the potential operations impacts associated with the proposed BEQ Complex replacement project.

The BEQ Complex replacement would house the same number of military personnel (i.e., 250) as are berthed at Building 20 and would not introduce any new land uses or activities that are not currently operating at Building 20. Therefore, the Proposed Action would not generate any new trips on a recurring basis. Instead, existing trips already on the transportation network would shift from their current routes, as appropriate, to travel between the proposed BEQ Complex replacement and the Main Post. Transportation impacts would also arise from the permanent closure of existing public streets (i.e., Alternatives 1 and 2) and the demolition of existing, occupied land uses (i.e., Alternatives 1, 2, and 4). The Proposed Action's transportation effects were determined based on the capacity of the transportation network to accommodate the redistribution, diversion, and removal of existing and project-related trips. The analysis found that none of the alternatives would cause any significant impacts, either during construction or operation of the Proposed Action. Although no measures are required to minimize the Proposed Action's effect on pedestrian and bicycle accessibility, transit service, or traffic, the following management measures are recommended for each of the 5 alternatives:

- Continued implementation of the Transportation Management Plan program for MBW to encourage trip reduction; and
- Ongoing training of personnel in pedestrian safety and requirements for Marines to observe all pedestrian signals and rules.

Because Alternatives 1 through 3 would involve the construction of new parking facilities for the proposed BEQ Complex, the following additional management measure is recommended:

- Ensuring that design of the BEQ Complex considers the location of proposed driveways and assess the likelihood and extent of queues that may form as vehicles are processed for access to BEQ Complex parking facilities and, to the extent feasible, avoid blockage of through lanes.

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List of Attachments

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1.0 INTRODUCTION

1.1 PROJECT LOCATION

This Transportation Impact Analysis (TIA) evaluates the potential transportation-related effects caused by the proposed construction and operation of multiple projects in support of Marine Barracks Washington (MBW), District of Columbia (DC). This TIA supports National Environmental Policy Act (NEPA) analysis of the Proposed Action, and substantiates the analysis of transportation impacts documented in the Environmental Impact Statement (EIS) for Multiple Projects in Support of Marine Barracks Washington (referred to from here forward as the "MBW EIS").

Existing MBW properties consist of the Main Post, the Building 20 Complex, and the Annex. In addition, MBW occupies two tenant sites: one located at Washington Navy Yard (WNY) for the Marine Corps Institute (MCI) and the other at Joint Base Anacostia-Bolling for vehicle storage (Figure 1-1). MBW is located within the Southeast Quadrant of Washington, DC, which encompasses the Capitol Hill, Anacostia, Eastern Market, Navy Yard, and Barracks Row neighborhoods. Southeast Washington is bisected by the Anacostia River, with the portion northwest of the river and south of Interstate (I)-695 (i.e., the Southeast Freeway) commonly referred to as Near Southeast. The MBW Main Post and the Building 20 Complex are located in the Capitol Hill neighborhood. The MBW Annex is located in the Near Southeast neighborhood.

1.2 OVERVIEW OF THE PROPOSED ACTION

The Proposed Action is to implement the following projects at or proximate to MBW, which are anticipated to occur within the next 5 years, in order to meet the purpose of and need for the Proposed Action described in the MBW EIS.

- The Bachelor Enlisted Quarters (BEQ) Complex replacement project: This project, which is the principal project to be analyzed in this TIA, includes 1) securing a site (acquiring land or establishing a tenant site on Department of Defense property) and 2) constructing a 191,045 square foot BEQ Complex (including supporting facilities and parking) to replace the existing Building 20 BEQ Complex.
- Main Post renovation projects: These projects include interior renovations to Building 7 at the Main Post.
- Project to foster integrated communities: These projects include improvements to the MBW Annex gate at 7th and K Streets and improvements to building facades, fencing, infrastructure, pedestrian amenities, and landscaping throughout the installation that are consistent with the neighborhood context.

The Proposed Action also includes projects anticipated to occur beyond the 5 year planning horizon for which information sufficient to conduct detailed NEPA analysis is not yet available. Principal among these projects is the potential reuse of the Building 20 site (aside from the possible retention of below-grade parking to continue to meet the BEQ Complex parking requirement).

Figure 1-1 MBW Properties and Location Map

Other projects include renovation of Building 9 to accommodate relocation of MCI from the tenant site at WNY to the Main Post, as well as some additional landscaping and maintenance projects. Once sufficient details on these actions become available to conduct a detailed analysis, additional NEPA analysis will be completed.

1.3 ALTERNATIVES CARRIED FORWARD FOR ANALYSIS

The MBW EIS evaluates 5 action alternatives (Figure 1-2). Each of these alternatives would involve the elements described above in Section 1.2. The primary difference between the alternatives would be the location of the proposed BEQ Complex replacement project, as described in the paragraphs below. Both Alternative 1 and Alternative 2 would permanently close a short segment of L Street SE. Alternatives 1, 2, and 4 would demolish existing occupied land uses to make way for the proposed BEQ Complex replacement.

1.3.1 Alternative 1

Under Alternative 1, the Marine Corps would acquire privately owned land and a government-owned right-of-way (ROW) segment for the dedicated purpose of constructing the proposed BEQ Complex. The Alternative 1 potential BEQ Complex site, Site A, consists of 3.0 acres and an approximately 340-foot segment of L Street SE between 8th and 9th Streets SE. The affected segment of L Street SE would be closed to vehicular and pedestrian traffic and street parking because the Site A buildable area footprint would overlap this street segment. Construction of Alternative 1 would require the demolition of numerous occupied and vacant structures, and summarized in Table 2.4-1 of the MBW EIS.

1.3.2 Alternative 2

Under Alternative 2, the Marine Corps would acquire privately owned land and a government-owned ROW segment for the dedicated purpose of constructing the proposed BEQ complex. The Alternative 2 potential BEQ site, Site B, consists of 1.8 acres composed of privately owned land and an approximately 315-foot segment of the L Street ROW between 10th and 11th Streets SE. This closure would be necessary to satisfy the Anti-Terrorism/Force Protection vehicular standoff distance. Existing structures to be demolished are presented in MBW EIS Table 2.4-2.

1.3.3 Alternative 3

Under Alternative 3, the Marine Corps would obtain appropriate real estate interest in a portion of the federally-owned at the General Services Administration-owned Southeast Federal Center for the dedicated purpose of constructing the proposed BEQ Complex. The Alternative 3 site, Site C, is a 2.1-acre site bound by M Street SE to the north and Tingey Street SE to the south. Alternative 3 would not involve the demolition of any existing occupied structures or the permanent closure of any public streets.

1.3.4 Alternative 4

Under Alternative 4, the replacement BEQ Complex (including support facilities) would be constructed at the WNY and the associated parking requirement would be met by utilizing the existing below-grade

parking on both the eastern and western portions of the Building 20 site. Alternative 4 would involve the demolition of Building 169.

1.3.5 Alternative 5

Under Alternative 5, the replacement BEQ Complex (including support facilities) would be constructed at the MBW Annex and the associated parking requirement would be met by utilizing the existing below-grade parking on both the eastern and western portions of the Building 20 site. Alternative 5 would not involve the demolition of any existing buildings or the closure of any existing roadways.

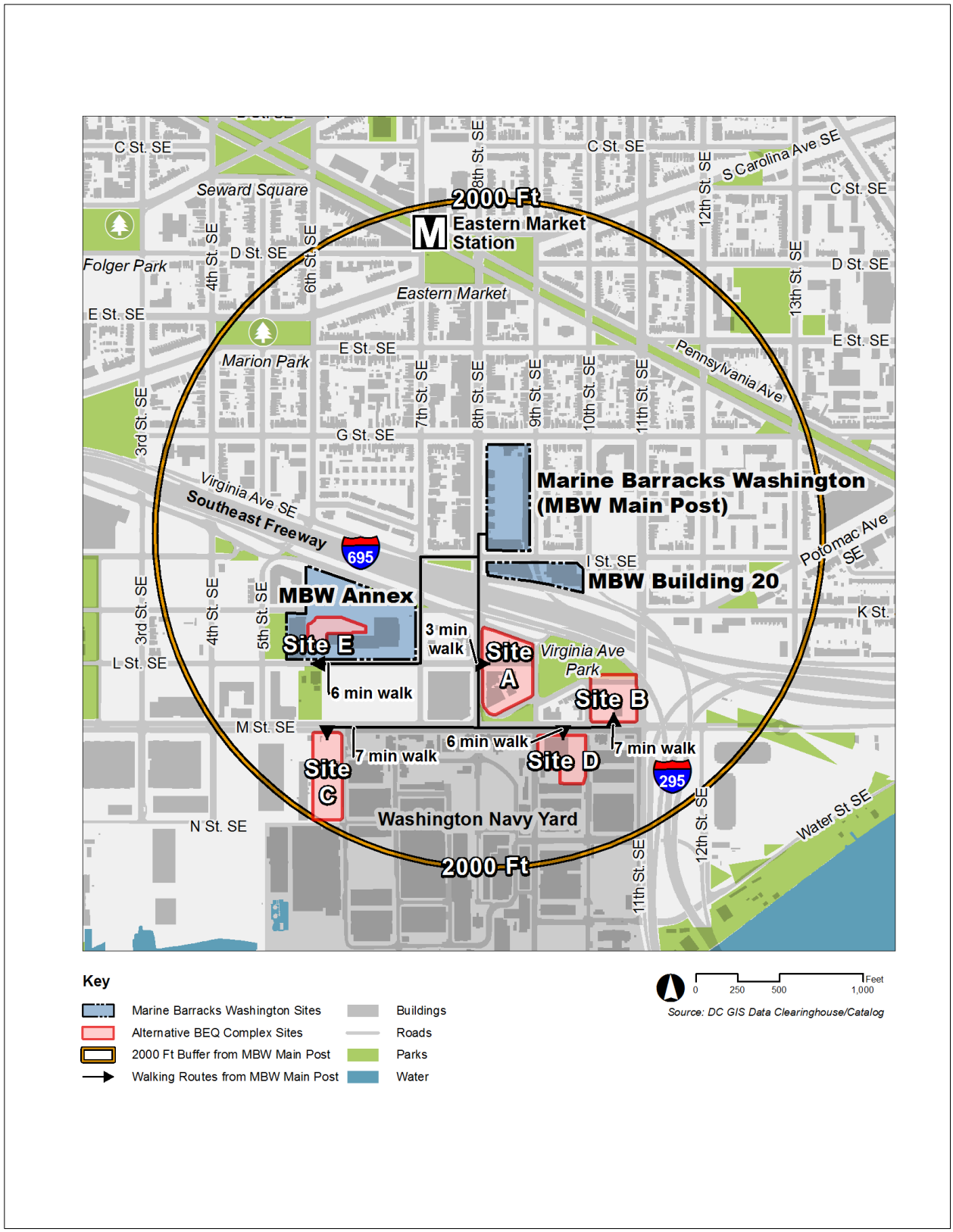

Figure 1-2 Alternatives Carried Forward for Detailed Analysis

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2.0 ANALYSIS METHODS

The BEQ Complex replacement project has the potential to impact various types of transportation facilities and modes of travel. For example, the proposed BEQ Complex replacement project would change the routes of pedestrian, bicycle, transit, and passenger car trips made by military personnel and civilian employees at the BEQ Complex for Alternatives 1 through 3. The proposed closure of existing public roads (i.e., Alternatives 1 and 2) would cause existing trips on these facilities to divert to alternate routes. Conversely, the demolition of existing occupied land uses (i.e., Alternatives 1, 2, and 4) would remove existing trips from the surrounding transportation network. Existing traffic patterns would also be affected by transportation improvements to be implemented by others, including the planned reconfiguration of the I-695 westbound off-ramp to I Street SE. Traffic impacts associated with the Main Post renovation projects and the project to foster integrated communities would be localized and limited to the duration of construction.

Impacts to pedestrian and bicycle accessibility, transit service, and parking were assessed qualitatively in Chapter 6. A significant impact on pedestrian accessibility may occur if a project were to increase walking distance beyond the "reasonable walking distance" defined by the NCPC. If a project were to remove or reroute bicycle facilities so as to substantially increase trip distances, then a significant impact to bicycle accessibility may result. Transit facilities may experience a significant impact if existing facilities and services are obstructed and/or rerouted, or if a substantial increase in transit demand occurs due to a project. A project may cause a significant impact to parking facilities is there is the net parking demand exceeds the available supply of spaces. Methods used to determine the significance of the Proposed Action's traffic impacts are described in the following paragraphs.

2.1 CAPACITY ANALYSIS PROCEDURES

Roadway and intersection operating conditions and the adequacy of existing roadway systems to accommodate projected future traffic are described in terms of Level of Service (LOS) ratings. LOS is a method used to rate the performance of streets, intersections, and other highway facilities. Developed by the Transportation Research Board (TRB), and documented since 1965 in various editions of the Highway Capacity Manual (HCM), LOS rates performance on a scale of A to F, with LOS A reflecting free flowing conditions and LOS F representing heavily congested conditions (TRB 2010). Table 2-1 summarizes the general traffic conditions associated with each LOS rating, while Figure 2-1 illustrates representative levels of congestion for each LOS grade.

Table 2-1 Traffic Conditions Associated with LOS Ratings

LOS Rating	Description of Traffic Conditions
A	Traffic flows freely, with little or no restrictions to vehicle maneuvers within the traffic stream.
B	Reasonably free-flowing conditions, with slight restrictions to vehicle maneuvers within the traffic stream.
C	Traffic speed approaches free-flowing conditions, but freedom to maneuver within the traffic stream noticeably restricted.
D	Traffic speed begins to be reduced, and freedom to maneuver is seriously limited due to a high concentration of traffic.
E	Unpredictable traffic flow, with virtually no usable gaps in the traffic stream to accommodate vehicle maneuvers.
F	Unstable traffic flow resulting in delays and the formation of queues in locations where traffic demand exceeds roadway capacity.

Source: TRB 2010.

2.1.1 Intersection LOS

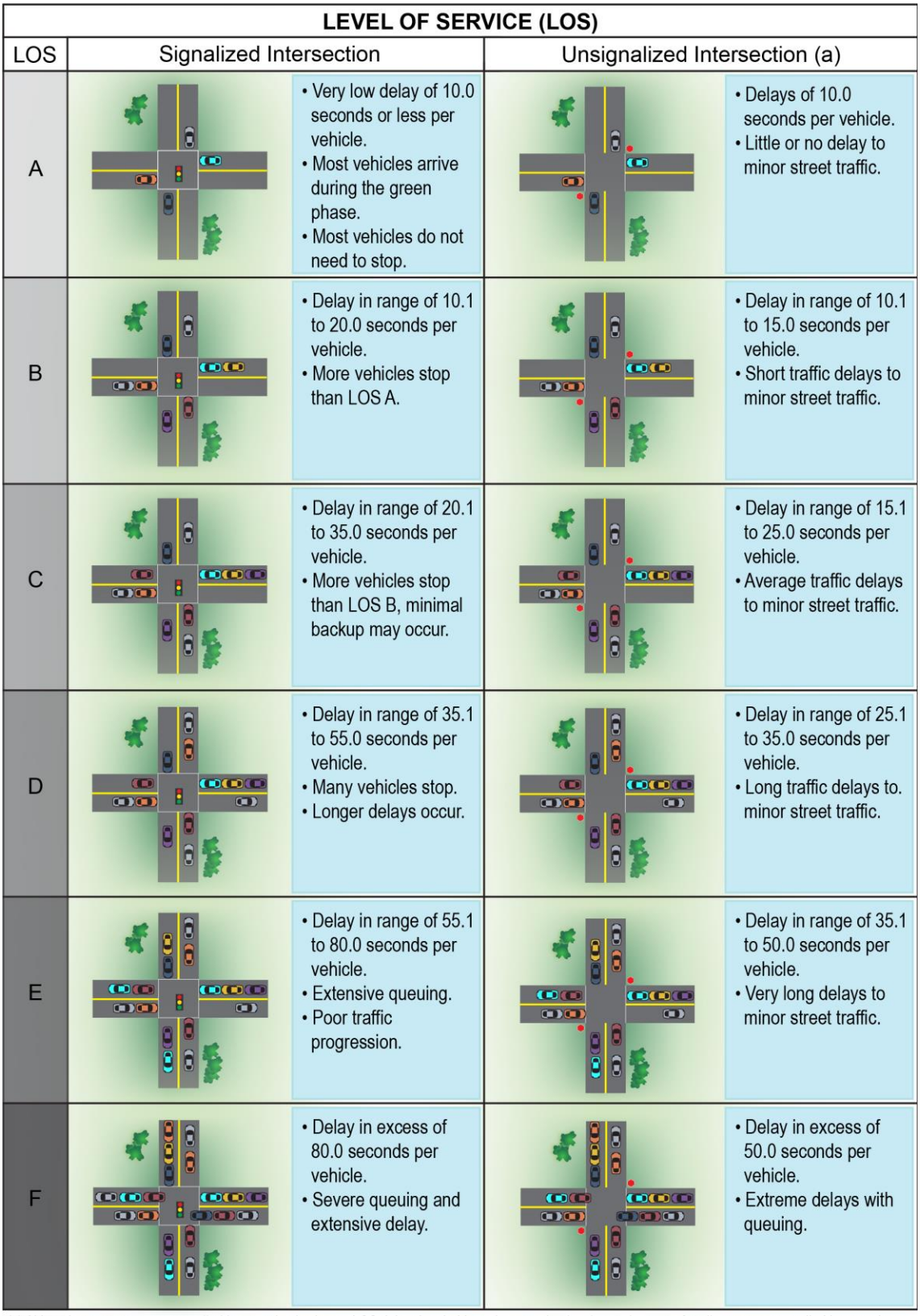
Intersection capacity analysis was conducted in accordance with procedures contained in Chapters 18 (signalized intersection) and 19 (unsignalized intersections with stop signs on one or two intersection legs) of the HCM (TRB 2010). Data used in intersection analysis include peak-hour[1] turning movement traffic volumes, the number of lanes, the timing and phasing of the traffic signal, and other factors. Analysis was performed using the Synchro 8 software (published by Trafficware), which incorporates HCM analysis procedures (TRB 2010). LOS for signalized intersections is measured in terms of delay in seconds per vehicle. Table 2-2 presents the delay values associated with each LOS grade for both signalized and unsignalized intersections.

Table 2-2 Intersection LOS Delay Thresholds

LOS Rating	Delay (seconds per vehicle)	
	Signalized Intersections	One-Way Stop-Controlled Intersections
A	≤10.0	≤10.0
B	>10.0 and ≤205.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

Source: TRB 2010.

[1] Typically the single hour having the highest concentration of traffic that occurs during traditional morning and afternoon commuting periods (i.e., 6:00 to 9:00 am and 3:30 to 6:30 pm).



(a) Although a two-way stop controlled intersection is shown, LOS delay thresholds and congestion levels are the same for all-way stop controlled intersections.
Source: TRB 2010.

Figure 2-1 Representative Traffic Levels for Each LOS Rating

2.2 TARGET LOS AND SIGNIFICANCE CRITERIA

For the purposes of this TIA, the target LOS for intersections in the region of influence (ROI) is LOS D (Federal Highway Administration [FHWA] 2013a). Accordingly, LOS A, B, C, and D are considered to be acceptable LOS, while LOS E and F are considered to be unacceptable. Where a project has a significant impact on an intersection that does not meet the target LOS of D, mitigation measures may be identified to minimize or avoid the project's effect on traffic.

Based on typical industry standards, a project is considered to have a *significant impact* on the operations of an intersection when one of the following occurs:

- The addition of project traffic results in a LOS dropping from LOS D or better to LOS E or F; or
- If an intersection currently operates at LOS E or F under base conditions and the project adds more than an additional 2 seconds of average vehicle delay.

In addition, a project may contribute toward a substantial cumulative effect if its traffic, when taken together with traffic from past, present and reasonably foreseeable future projects, causes intersection LOS to decline from LOS A through D to LOS E or F, and the project increases average delay by 2 seconds or more.

2.3 TYPES OF PROJECT TRAFFIC EFFECTS

The Proposed Action would not involve any land uses or activities that would result in a recurring increase in operations-related traffic. Instead, traffic effects would arise for the following situations:

- Redistribution of military personnel and civilian worker trips due to the proposed BEQ Complex replacement project;
- Diversion of existing traffic due to permanent closure of public streets (i.e., portions of L Street SE); and
- Removal of existing traffic due to the demolition of existing occupied land uses.

As noted in the MBW EIS, each of the alternative sites was selected because of its proximity to the MBW Main Post. Specifically, each site is within a 10-minute walking distance of the Main Gate entrance to the Main Post. Therefore, it is likely that travel between the proposed BEQ Complex and the Main Post would be predominantly on foot, as it is today (refer to Section 5.1). However, given that Building 20 is located much closer to the Main Post than any of the action alternatives, it is possible that some pedestrian trips could shift to other travel modes under unusual circumstances (e.g., inclement weather). Although this mode shift would be atypical, this TIA accounts for a relatively minor shift in travel mode in order to provide a conservative analysis.

2.4 TRAFFIC REGION OF INFLUENCE

For the purposes of this TIA, the ROI consists of those intersections expected to accommodate the greatest concentration of redistributed and diverted traffic. These intersections lie along likely routes between the alternative BEQ Complex sites and the Main Post, and would therefore accommodate the bulk of redistributed and diverted traffic. The ROI consists of nine intersections (Figure 2-2). Table 2-3 lists the ROI intersections and type of existing traffic control provided at each location.

Table 2-3 ROI Intersections

Intersection*	Traffic Control
1. I Street SE/8th Street SE	Signal
2. I-695 on-ramp/8th Street SE	Signal
3. Virginia Ave SE/8th Street SE	Signal
4. M Street SE/8th Street SE	Signal
5. M Street SE/9th Street SE	Signal
6. M Street SE/11th Street SE	Signal
7. I Street SE/9th Street SE/I-695 off-ramp	One-Way Stop Control
8. I Street SE/11th Street SE	Signal
9. M Street SE/Isaac Hull Avenue SE	Signal

Note: *Figure 2-2 depicts the intersection numbers.

Figure 2-2 Intersections in the ROI

3.0 EXISTING CONDITIONS

The Proposed Action is located in an urbanized area that contains a mixture of land use types, and accommodates a variety of travel modes. As part of the planning process for the Proposed Action, the Naval Facilities Engineering Command (NAVFAC) prepared a Transportation Management Program (TMP) (NAVFAC 2012a). The purpose of the TMP was to reduce traffic congestion, conserve energy, and improve air quality by seeking to reduce and/or shorten the number of employee single-occupancy vehicle trips in the workday commute to and from MBW. The TMP also included an inventory of existing transportation facilities, an employee transportation demand survey, and other data. Attachment A contains excerpts from the TMP related to existing transportation conditions.

3.1 PEDESTRIAN AND BICYCLE FACILITIES

Sidewalks are provided along both sides of segments of I Street SE, Virginia Avenue SE, M Street SE, 7th Street SE, 8th Street SE and 11th Street SE. Marked crosswalks and pedestrian countdown heads are provided for all pedestrian movements at each of the intersections in the ROI. Although the traffic signals along 8th Street SE accommodate pedestrian movements, the signal timing favors vehicular traffic, and pedestrians have been observed to jaywalk instead of waiting for the pedestrian signal. Vehicle collisions with pedestrians have been documented at the 8th Street SE intersections with I Street SE and L Street SE. Under existing conditions, north/south pedestrian facilities along 7th Street SE, 8th Street SE, and 11th Street SE pass underneath I-695. Although street lights are provided along both 7th Street SE and 8th Street SE where these roadways pass beneath the freeway, the relative isolation of these areas could pose possible safety and security concerns for pedestrians, particularly if they traverse these areas during darkness.

View of 8th Street SE beneath I-695

View of 7th Street SE beneath I-695

Numerous existing and proposed bicycle routes and lanes are located near the Proposed Action (refer to Attachment A). There is a signed bike route with a striped bike lane along 11th Street SE. The Capital Bikeshare, a bicycle renting program, provides a Bikeshare station near the Main Post. Many roadways near the Proposed Action provide on-street vehicular parking and bike routes that are not delineated with pavement striping. In these circumstances, there is the potential for conflicts between passing bicyclists and parking vehicles and motorists entering or exiting their vehicles.

3.2 TRANSIT FACILITIES

Transit facilities near the Proposed Action include Metrorail (i.e., Green Line, Blue Line and Orange Line); DC Circulator bus service; and Metrobus service. The Metrorail Eastern Market Station (Blue and Orange Line service) is located within walking distance of the MBW Main Post. Numerous bus routes traverse 8th Street SE between M Street SE and I Street SE. Metrobus stops are provided proximate to the Main Post along 8th Street SE (refer to Attachment A).

3.3 HIGHWAY FACILITIES

Major regional roadways near the Proposed Action include Pennsylvania Avenue and I-695 (i.e., the Southeast Freeway). Multi-lane highways within the ROI include I Street SE (three lanes westbound, to the east of 8th Street SE); M Street SE (two lanes in each direction, plus parking lanes, west of 10th Street SE); and 11th Street SE (a mix of through and turning lanes north of M Street SE). Figure 3-1 shows the lane geometry and traffic control at ROI intersections.

3.3.1 Traffic Conditions

Existing (year 2012) traffic conditions within the ROI were evaluated as part of the Virginia Avenue Tunnel Reconstruction EIS (FHWA 2013b). In addition, a separate analysis was also performed at intersections 7 and 8 based on data furnished by the 11th Street Bridge Project contractor (Facchina Construction Company 2014). Analysis worksheets for these two intersections are provided in Attachment B. As shown in Table 3-1, all intersections are characterized by acceptable LOS D or better conditions during both peak hours (FHWA 2013a). It is noted that baseline traffic conditions in the study area are in transition, as the area is experiencing development and growth. This context is incorporated into the approach for the impacts analysis in Section 6.0.

Table 3-1 Summary of Intersection LOS – Existing Conditions

Intersection		Traffic Control	Peak Hour	Existing	
				Delay[(a)]	LOS
1	I Street SE/8th Street SE	Signal	AM	18.9	B
			PM	19.2	B
2	I-695 on-ramp/8th Street SE	Signal	AM	12.4	B
			PM	12.7	B
3	Virginia Avenue SE/8th Street SE	Signal	AM	34.7	C
			PM	42.5	D
4	M Street SE/8th Street SE	Signal	AM	18.2	B
			PM	13.3	B
5	M Street SE/9th Street SE	Signal	AM	10.7	B
			PM	13.9	B
6	M Street SE/11th Street SE	Signal	AM	20.0	C
			PM	42.6	D
7	I St. SE/9th St. SE/I-695 off-ramp	One-Way Stop	AM	25.6	D
			PM	13.9	B

Intersection		Traffic Control	Peak Hour	Existing	
				Delay[(a)]	LOS
8	I St. SE/11th St. SE	Signal	AM	20.2	C
			PM	18.9	B
9	M St. SE/Isaac Hull Ave. SE	Signal	AM	4.1	A
			PM	23.2	C

Notes: [(a)] Delay is measured in seconds per vehicle.
Sources: FHWA 2013a, Facchina Construction Company.

3.3.2 Parking

Vehicle parking at MBW is by permit only and finding a space is accomplished largely on an ad hoc basis. Of the 534 off-street spaces provided at MBW, 212 are provided at Building 20, 288 at the MBW Annex, and 34 at the Main Post. Of this total, 150 are allocated to commuters, while the remaining 384 are set aside for official vehicles and residents.

The majority of the public parking spaces in the study area restrict parking to a maximum of two hours, unless longer durations are allowed by residential permit. This includes on-street parking is provided along various roadways throughout the study area. There is a metered surface lot located southwest of the 8th and I Street SE intersection, beneath the I-695 freeway overpass. These spaces would be lost during construction of Virginia Avenue Tunnel Reconstruction (NAVFAC 2012a), but would be restored after the completion of the Virginia Avenue Tunnel project, which is projected to be complete by 2016 (refer to Section 4.1.1). Other private pay lots located within the study area include “Lot W” for the Nationals Stadium parking and the parking lot at the former Exxon Station site. Lot W is located at the southwest corner of 7th and L Streets SE. This site is planned for construction as part of the Cappers Carrollsburg planned unit development. It is typically operated weekdays and during Nationals home games. On-street parking is provided along various roadways adjacent to the Main Post, Building 20 and the MBW Annex.

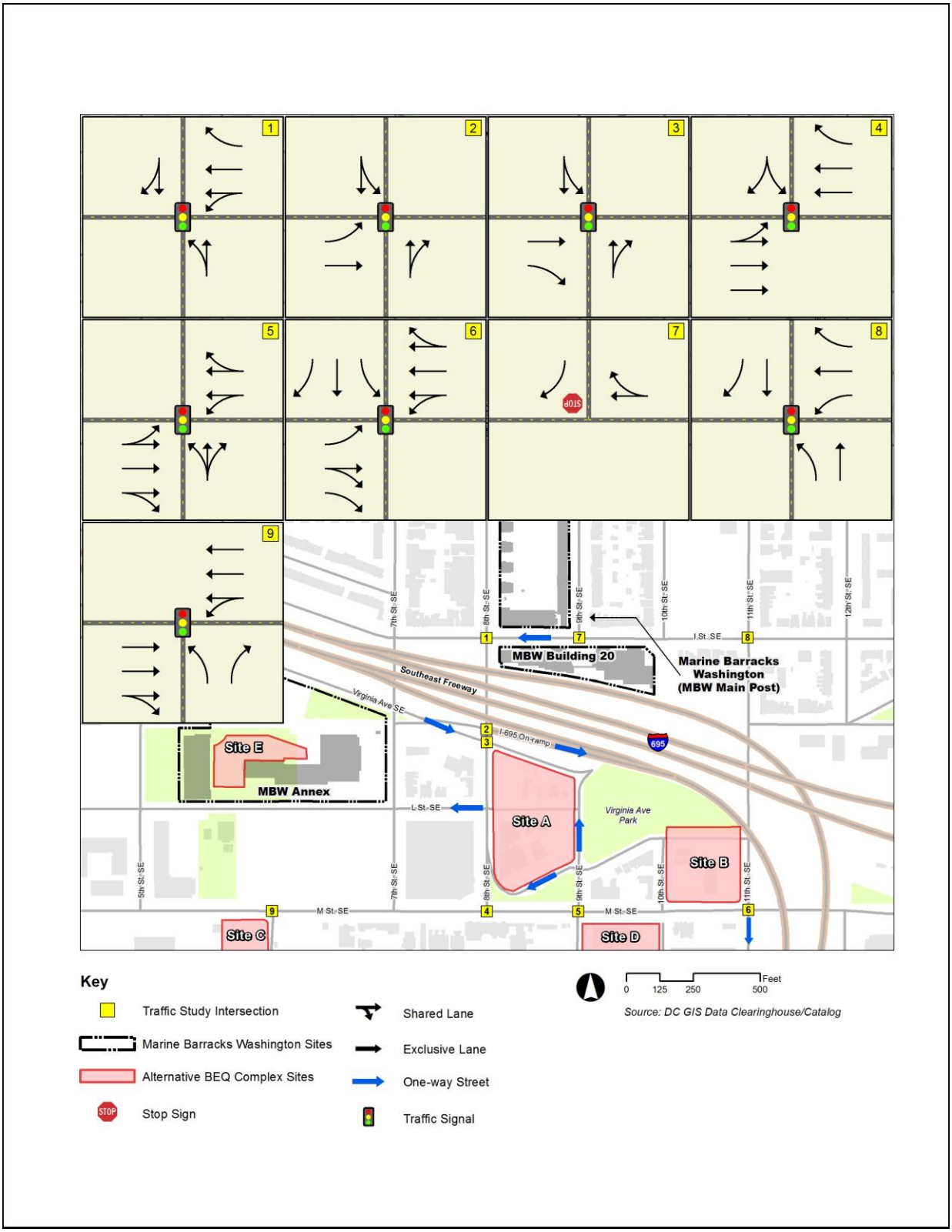


Figure 3-1 Existing Intersection Characteristics

4.0 NO ACTION ALTERNATIVE

The following paragraphs describe near term projects that will contribute to transportation conditions that are expected to be in place at the time the Proposed Action would be implemented (i.e., within an approximately 5-year planning horizon from the publication of the Record of Decision [anticipated early 2016]). The Proposed Action's traffic impacts were determined based on the incremental effect of each action alternative relative to the No Action Alternative.

4.1 NEAR TERM PROJECTS

There are several significant projects near the Proposed Action. Some of these projects would alter the transportation network in the ROI, while others would increase travel demand as the result of land development. Brief summaries of these projects are provided in the paragraphs that follow.

4.1.1 Virginia Avenue Tunnel Reconstruction Project

This project would involve the reconstruction of an existing railroad tunnel that runs generally parallel to the I-695 freeway between 2nd Street SE and 11th Street SE. The reconstructed tunnel would be substantially larger than the existing facility, and would provide sufficient width for two sets of track, and would be of sufficient height to accommodate double-stacked freight cars. The project would involve a sequence of improvements that would retain freight rail service along a temporary track while the tunnel reconstruction occurs. Although the limits of disturbance would encompass the existing alignment of Virginia Avenue SE (including the surface parking lot along 8th Street SE beneath I-695), north/south vehicular and pedestrian access would be maintained during construction. After construction, Virginia Avenue SE would be restored to its pre-construction condition. However, if desired by stakeholders, post-construction changes to this facility could be incorporated. One possible change involves removing one eastbound lane on Virginia Avenue SE east of 8th Street SE, and reconfiguring the east leg of the Virginia Avenue SE/8th Street SE intersection to accommodate both eastbound and westbound traffic[2]. Project construction is expected to be complete by 2016. The Draft EIS was circulated in July 2013, and the project web site indicates that the Record of Decision was planned to have been issued in Summer 2014. As of the date of this TIA (February 2015), the Record of Decision has not been issued.

4.1.2 11th Street Bridge Project

The 11th Street Bridge project involves the replacement of two existing bridges over the Anacostia River with three new bridges that would separate local and freeway traffic. The project has completed NEPA review and construction began on the first phase in late 2009. The second phase of this project involves various improvements along I-695, 11th Street NE, and Virginia Avenue SE near the Proposed Action. One of the most notable improvements involves elevating Southeast Boulevard between 8th Street SE and Barney Circle SE to form an at-grade intersection with 11th Street NE. This project, which is

[2] Only eastbound traffic is currently allowed on this segment.

scheduled for completion in 2015, would also reconfigure and relocate the existing on-ramp from 8th Street SE to I-695, and the existing off-ramp from I-695 to I Street SE.

4.1.3 M Street SE/SW Transportation Planning Study

The DC Department of Transportation (DDOT) completed an extensive analysis of alternative conceptual improvements along M Street SE and SW. The study considered reconfiguring the roadway to accommodate various combinations of different modes of travel along the curb lanes, including transit vehicles, bicycles, and personal vehicles. Depending on the alternative selected, the M Street SE/SW Transportation Planning Study could reduce on-street parking near the Proposed Action. The final report was approved in 2012 and NEPA analysis has not yet begun.

4.1.4 Arthur Capper/Carrollsburg Housing Redevelopment

In 2001, the District received a $34.9 million Hope VI grant to redevelop the 23-acre Capper/Carrollsburg public housing site as a mixed-use community with over 1,600 new rental and home ownership units, 700,000 square feet of office space, and 50,000 square feet of retail space. Construction on Phase I (a townhouse development called "Capitol Quarter") was completed in the summer of 2010 and is located between 3rd Street SE, 5th Street SE, Virginia Avenue SE, and L Street SE. Phase II, which is located in the blocks between 3rd Street SE, 4th Street SE, I Street SE, and L Street SE, was completed in 2012. In total, both phases of Capitol Quarter contain a combined total of about 320 residential units, most of which are single-family townhomes. Additional development areas are located in the city blocks surrounding Capitol Quarter, and will include senior housing units and office buildings (FHWA 2013b).

4.1.5 Other Redevelopment Activities

Various redevelopment activities are planned in the areas surrounding the ROI. These activities consist of new, or renovated, residential uses, office buildings, retail, hotel, and mixed-use developments. Between 2012 and 2016, it is anticipated that more than 7.7 million square feet of development would be built and occupied in the areas around the ROI (FHWA 2013b). Based on estimates provided by the Capitol Riverfront Business Improvement District, development between 2012 and 2016 would consist of the following:

- Over 4.1 million square feet of office space;
- Over twenty thousand office employees (assuming 200 square feet per employee);
- Over 2,600 new residential units;
- Over 400,000 square feet of retail space; and
- Nearly 400 new hotel rooms.

Traffic generation from these land uses was estimated and incorporated into the No Action Alternative, as described in the Traffic Operational Analysis Report (FHWA 2013a) prepared for the Virginia Avenue Tunnel Reconstruction EIS.

4.2 PEDESTRIAN AND BICYCLE CONDITIONS

Near term projects are expected to have a mixed effect on bicycle and pedestrian accessibility. The possible reduction in lanes on Virginia Avenue SE would reduce the amount of time required for

pedestrians to cross this roadway, and would be expected to provide a benefit in terms of pedestrian safety. Also, removal of the west leg of the I-695/8th Street SE intersection would reduce the number of potential vehicle/pedestrian conflicts, facilitating safe crossing of this intersection. However, the addition of westbound traffic to the Virginia Avenue SE/8th Street SE would introduce a new traffic movement that is unfamiliar to pedestrians and bicyclists, and possibly increase the likelihood of conflicts until pedestrians and bicyclists have adapted to this condition. Redevelopment activities would increase pedestrian activity, possibly resulting in congestion along sidewalk choke points (i.e., locations where sign posts, light poles and other urban infrastructure obstruct pedestrian flow along sidewalks). Depending on the alternative selected for the M Street SE/SW Transportation Planning study, bicycle access would be improved if new delineated bike lanes are to be provided along M Street SE, and if existing on-street parking is removed.

4.3 TRANSIT CONDITIONS

Transit service along M Street SE may be improved, depending on the alternative selected in the M Street SE/SW Transportation Planning Study. However, this benefit would be balanced somewhat by the increase in demand associated with various redevelopment projects, which could increase crowding on existing transit facilities.

4.4 TRAFFIC CONDITIONS

4.4.1 Highway Network

Under the No Action Alternative, most intersections in the ROI are expected to have the same intersection lane geometry and traffic control as under existing conditions. However, the possible change at the 8th Street SE intersection with Virginia Avenue SE contemplated in the Virginia Avenue Tunnel Reconstruction project is assumed to be in place. Also, the planned reconfiguration of the I-695 off-ramp to I Street SE is assumed to have been implemented. This improvement would close the existing off-ramp that is located near the I Street SE/10th Street SE intersection, and would re-open the existing off-ramp that bisects the Building 20 site, and is situated opposite 9th Street SE. This improvement would involve constructing a narrow median along a portion of I Street SE to separate westbound through traffic on I Street SE from traffic turning onto I Street SE from the I-695 off-ramp. This design would allow northbound left turning vehicles to turn onto I Street SE without having to merge with westbound through traffic on I Street SE. This planned improvement would result in the diversion of trips approaching Building 20 via the existing I-695 off-ramp. Figure 4-1 illustrates intersection characteristics under the No Action Alternative.

4.4.2 Traffic Volumes

Peak hour traffic volumes were estimated based on the year 2016 conditions evaluated in the Virginia Avenue Tunnel EIS. The year 2016 volumes were increased by a factor of 0.8 percent per year based on growth factors described in Chapter 4 of the Traffic Operations Analysis Report (FHWA 2013a) to reflect traffic growth from development in the region. In order to provide a conservative analysis, three years of growth were assumed, even though the Proposed Action is expected to be constructed within the 5-year planning horizon. Figure 4-2 shows peak hour traffic volumes under the No Action Alternative.

4.4.3 Intersection Analysis

Table 4-1 displays the LOS analysis results for ROI intersections under the No Action Alternative. As shown in the table, all intersections within the ROI would operate at LOS C or better conditions during both peak hours, with the exception of the M Street SE/11th Street SE intersection, which is characterized by congested LOS E conditions during the afternoon peak hour. As shown in this table, the increase in delay and drop in LOS indicates a significant traffic effect based on the significance criteria described in Section 2.2; however this impact would not be caused by the Proposed Action. Instead, it would occur as the result of traffic increases from anticipated near-term development near the ROI and background traffic growth in the surrounding region. Refer to Attachment B for intersection capacity worksheets.

Table 4-1 Summary of Intersection LOS and Traffic Effects under the No Action Alternative

Intersection		Peak Hour	Existing Conditions		No Action Alternative		Impact	
			Delay[(a)]	LOS[(b)]	Delay[(a)]	LOS[(b)]	Δ [(c)]	Significant?
1	I Street SE/8th Street SE	AM	18.9	B	21.8	C	2.9	NO
		PM	19.2	B	20.1	C	0.9	NO
2	I-695 on-ramp/8th Street SE	AM	12.4	B	4.0	A	-8.4	NO
		PM	12.7	B	0.6	A	-12.1	NO
3	Virginia Avenue SE/8th Street SE	AM	34.7	C	19.0	B	-15.7	NO
		PM	42.5	D	22.3	C	-20.2	NO
4	M Street SE/8th Street SE	AM	18.2	B	26.2	C	8.0	NO
		PM	13.3	B	13.4	B	0.1	NO
5	M Street SE/9th Street SE	AM	10.7	B	12.3	B	1.6	NO
		PM	13.9	B	16.9	B	3.0	NO
6	M Street SE/11th Street SE	AM	20.0	C	33.8	C	13.8	NO
		PM	42.6	D	76.7	E	34.1	YES[(c)]
7	I Street SE/9th Street SE/I-695 off-ramp	AM	25.6	D	19.8	C	-5.8	NO
		PM	13.9	B	11.7	B	-2.2	NO
8	I Street SE/11th Street SE	AM	20.2	C	20.6	C	0.4	NO
		PM	18.9	B	19.1	B	0.2	NO
9	M Street SE/Isaac Hull Avenue SE	AM	4.1	A	5.1	A	1.0	NO
		PM	23.2	C	24.9	C	1.7	NO

Notes: [(a)] Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.

[(b)] LOS calculations are based on the methodology in TRB (2010) and performed using Synchro 8.

[(c)] Change in delay projected near term traffic growth from development in the surrounding area, as compared to existing conditions, not due to the Proposed Action. This impact is cumulative and would occur under all alternatives..

4.4.4 Parking

Implementation of all projects proposed within or near the ROI would have an adverse effect on both parking supply and demand. Alternatives considered in the M Street SE/SW Transportation Planning Study would permanently remove existing on-street parking along M Street SE, and the Virginia Avenue Tunnel Reconstruction project would temporarily close an existing surface parking lot located on 8th Street SE, located beneath the I-695 bridge. Proposed redevelopment would likely increase demand for both on-street and off-street parking spaces.

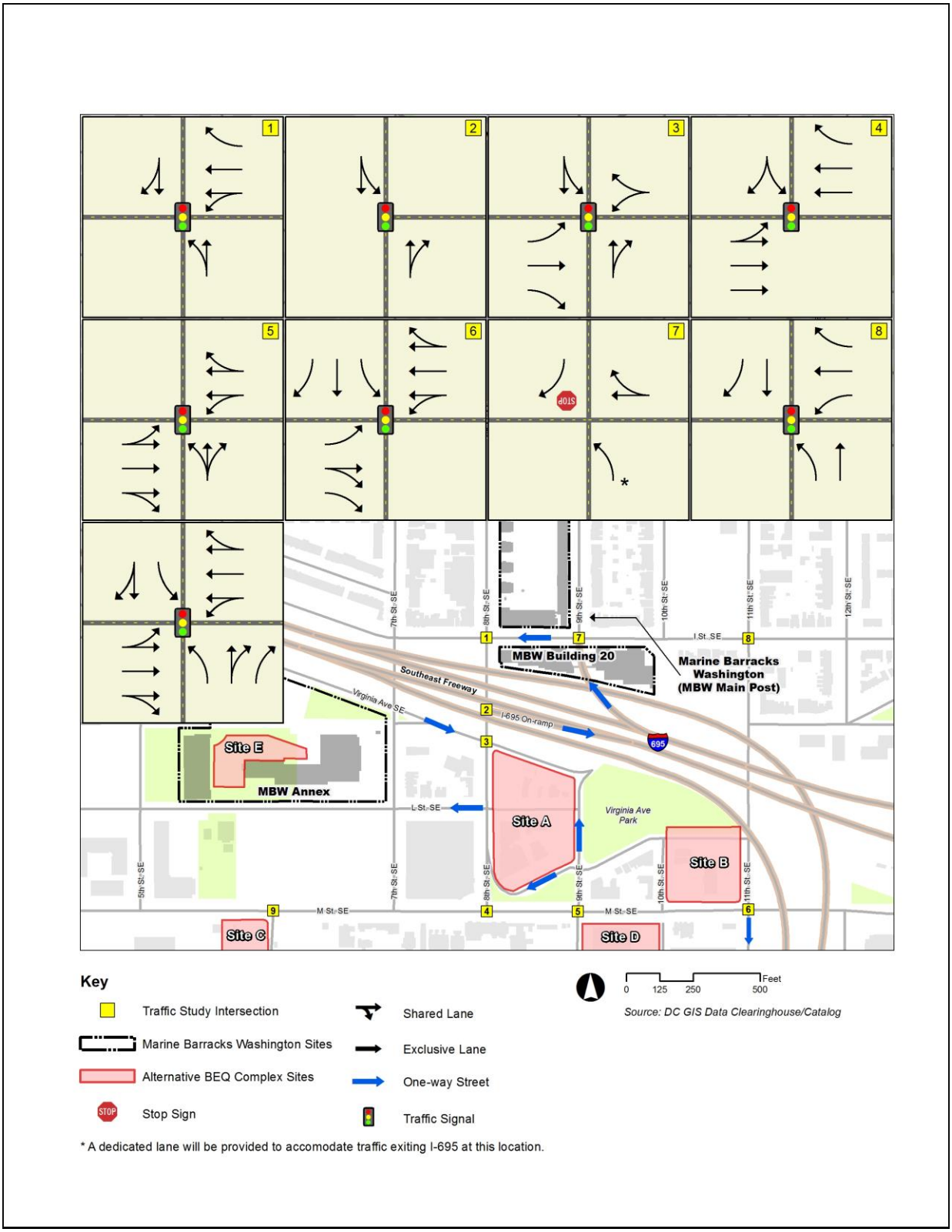


Figure 4-1 No Action Alternative Intersection Characteristics

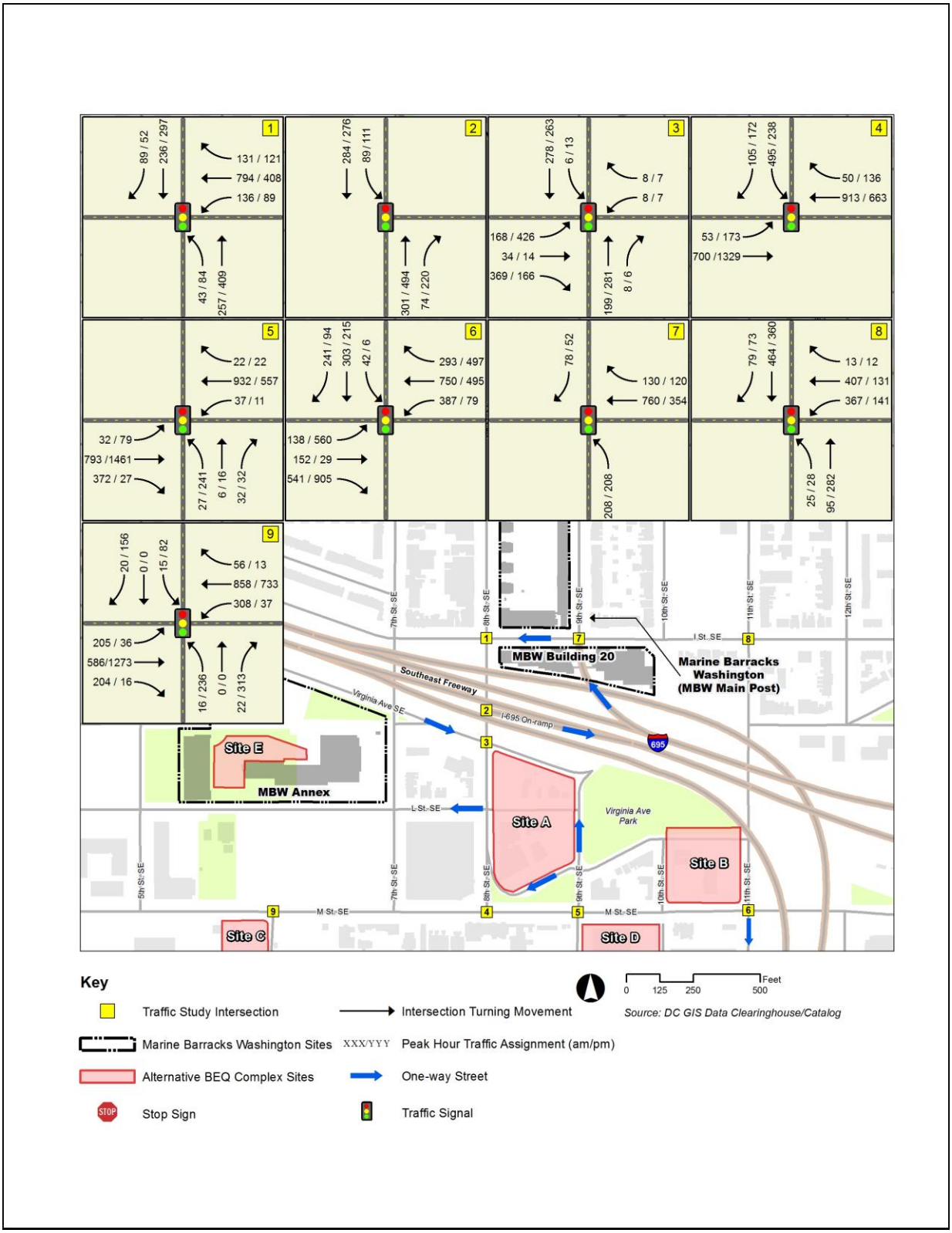


Figure 4-2 No Action Alternative Traffic Volumes

5.0 PROJECT TRAFFIC

As discussed in Section 2.3, implementation of the Proposed Action would not add any new trips to the surrounding street system on a recurring basis. Instead, traffic effects would arise from the redistribution of trips by military personnel and civilian employees due to the replacement of the BEQ Complex; the diversion of existing trips due to the closure of public streets; and the removal of existing trips due to the demolition of existing occupied buildings. This TIA also considers the possibility that some pedestrian trips may shift to personal vehicles and/or other modes of travel, as the result of the increased walking distance (relative to existing conditions), and under unusual circumstances. The following paragraphs describe the process used to estimate these anticipated traffic effects.

5.1 TRAFFIC REDISTRIBUTION

As part of the TMP, a travel survey was distributed to military personnel and civilian employees of MBW. The survey collected data on a wide range of topics, including the time of day, day of week, and mode of travel for weekday commuting. Table 5-1 presents the number of trips by personal vehicle or other modes for military personnel and civilian workers. Under existing conditions, travel by military personnel between Building 20 and their work destination (i.e., the Main Post) is entirely on foot (i.e., walking or jogging). This is reasonable, given that the Main Post is located directly across I Street SE from Building 20. Civilian worker trips to and from Building 20 are more or less evenly split between personal vehicle and public transit (i.e., Metrorail).

The redistribution of civilian employee personal vehicle trips was estimated based on the trip origin data provided in the TMP. Based on this data, it was assumed that 50 percent of the employee trips currently approach Building 20 via I-695 eastbound, with the balance coming in by I-695 westbound. For Alternatives 1 through 3, existing civilian employee trips were removed from existing routes and redistributed to new routes to and from each alternative site using this regional distribution pattern. Because Alternative 4 would provide parking at the existing Building 20 parking structure, no traffic redistribution would occur as a result of this alternative.

To provide a conservative analysis, this TIA evaluates a mode shift for military personnel trips due to the increased walking distance. Although driving would be discouraged by limited parking supply, other types of trips (such as informal shuttles) could occur. To reflect this possibility, it was assumed that 15 percent of the other modes trips for Alternatives 1 through 3 would shift to personal vehicles under unusual conditions (i.e., inclement weather). These trips were added to the ROI based on the most direct route between each alternative site and the Main Post. Because parking for Alternatives 4 and 5 would be provided at Building 20, which is located approximately 500 feet from the Main Post, the potential mode shift for this alternative is expected to involve public transit rather than personal vehicles.

Table 5-1 Building 20 Weekday Trip Generation

Trip Generator	Number	Percentage of Trips on Weekdays	Percentage of Weekday Trips in Peak Hour	Percentage of Trips by Personal Vehicle	AM Peak Hour [a]				PM Peak Hour [a]			
					Inbound		Outbound		Inbound		Outbound	
					Personal Vehicle	Other Modes [b]	Personal Vehicle	Other Modes [b]	Personal Vehicle	Other Modes [b]	Personal Vehicle	Other Modes [b]
Military Personnel	250 personnel	80%	42%	nominal	0	0	0	84	0	84	0	0
Civilian Employees	12 employees	100%	75%	41%	4	5	0	0	0	0	4	5
Total Weekday Peak Hour Trip Generation:					**4**	**5**	**0**	**84**	**0**	**84**	**4**	**5**

Notes: [a] Although many military and civilian trips occur before the morning commuting period (i.e., 6:00 to 9:00 am), all trips are included to provide a conservative estimate of trip generation.

[b] For military personnel, "other modes" refers to pedestrian trips (i.e., walking or jogging). For civilian employees, "other modes" refers to transit trips (i.e., Metrorail).

Source: NAVFAC 2012a.

5.2 TRAFFIC DIVERSION

The permanent closure of portions of L Street SE under Alternatives 1 and 2 would cause some existing trips to divert from this facility to alternate routes. Although no traffic data was collected on these segments, the volume of traffic is expected to be relatively minor given the design and location of this facility (i.e., a narrow street providing access to and from local land uses). For the purposes of this TIA, it was assumed that the volume of traffic diverted would be equivalent to the relatively minor amount of traffic removed from the network as the result of demolishing existing occupied buildings under Alternatives 1 and 2.

5.3 TRAFFIC REMOVAL

Table 5-2 presents the volume of traffic to be removed as the result of each of the action alternatives. The amount of traffic to be removed as the result of demolishing existing land uses was estimated using peak hour trip generation rates published in the 9th Edition of the Trip Generation Manual (Institute of Transportation Engineers [ITE] 2012). As noted in the Trip Generation Manual, trip rates were based on counts performed at land uses located in suburban contexts, where development patterns and transportation infrastructure emphasize access by personal vehicles. To more accurately estimate traffic generation of these uses within the more urbanized context, the ITE rates were adjusted based on household travel survey data for infill developments collected by the Metropolitan Washington Council of Governments (National Cooperative Highway Research Program 2013). Table 5-2 presents the estimated traffic generation of existing uses to be demolished.

As discussed above, for Alternatives 1 and 2, the relatively minor amount of traffic to be removed as the result of building demolition is assumed to be equivalent to the amount of traffic to be diverted as the result of street closure. Therefore, no traffic assignment was made for traffic removal for these alternatives. For Alternative 4, the reduction of traffic was estimated based on the distribution of trips at each of the WNY access points (NAVFAC 2012b) and existing traffic patterns at the M Street SE intersection with 9th Street SE.

5.4 TRAFFIC REDISTRIBUTION AND ASSIGNMENT

Figures 5-1 through 5-5 present the combined redistribution and assignment of traffic associated with the Proposed Action for Alternatives 1 through 5, respectively.

Table 5-2 Traffic Generation Reductions due to Demolition of Occupied Land Uses, by Alternative

Land Use [a]	Intensity	AM Peak Hour					PM Peak Hour				
		Trip Rate [b]	In : Out Ratio [b]	In	Out	Total	Trip Rate [b]	In : Out Ratio [b]	In	Out	Total
Alternative 1											
Single Tenant Office Building	12 ksf	0.85	0.89 : 0.11	9	1	10	0.9	0.45 : 0.55	5	6	10
Specialty Retail Center	7.6 ksf	0.50	0.61 : 0.39	2	1	4	1.0	0.44 : 0.56	3	4	8
Single-Family Detached Housing	2.0 du	0.48	0.25 : 0.75	0	1	1	0.7	0.63 : 0.37	1	0	1
Apartment	4.0 du	0.33	0.20 : 0.80	0	1	1	0.4	0.65 : 0.35	1	1	2
High-Turnover (Sit-Down) Restaurant	9 ksf	9.91	0.52 : 0.48	47	44	91	7.8	0.59 : 0.41	42	29	72
Alternative 1 Traffic Generation Reduction:				**59**	**48**	**107**			**52**	**41**	**93**
Alternative 2											
Specialty Retail Center	3.1 ksf	0.50	0.61 : 0.39	1	1	2	1.0	0.44 : 0.56	1	2	3
Single-Family Detached Housing	4.0 du	0.48	0.25 : 0.75	0	1	2	0.7	0.63 : 0.37	2	1	3
Alternative 2 Traffic Generation Reduction:				**1**	**2**	**3**			**3**	**3**	**6**
Alternative 4											
Government Office Building	22 ksf	2.76	0.84 : 0.16	50	10	60	5.4	0.74 : 0.26	86	30	117
Alternative 4 Traffic Generation Reduction:				**50**	**10**	**60**			**86**	**30**	**117**

Notes: du = dwelling unit(s); ksf = thousands of square feet.

[a] Land use categories taken from ITE Trip Generation Manual, 9th Edition (ITE 2012).

[b] Peak hour trip generation rates and directional splits were taken from ITE 2012. Rates were adjusted to reflect enhanced transit service and pedestrian accessibility using adjustment factors published in National Cooperative Highway Research Program 2013. The morning trip rate and directional distribution for the Shopping Center land use category was used to represent the Specialty Retail Center.
There would be no trip reduction for Alternatives 3 and 5, as they would be constructed on vacant land.

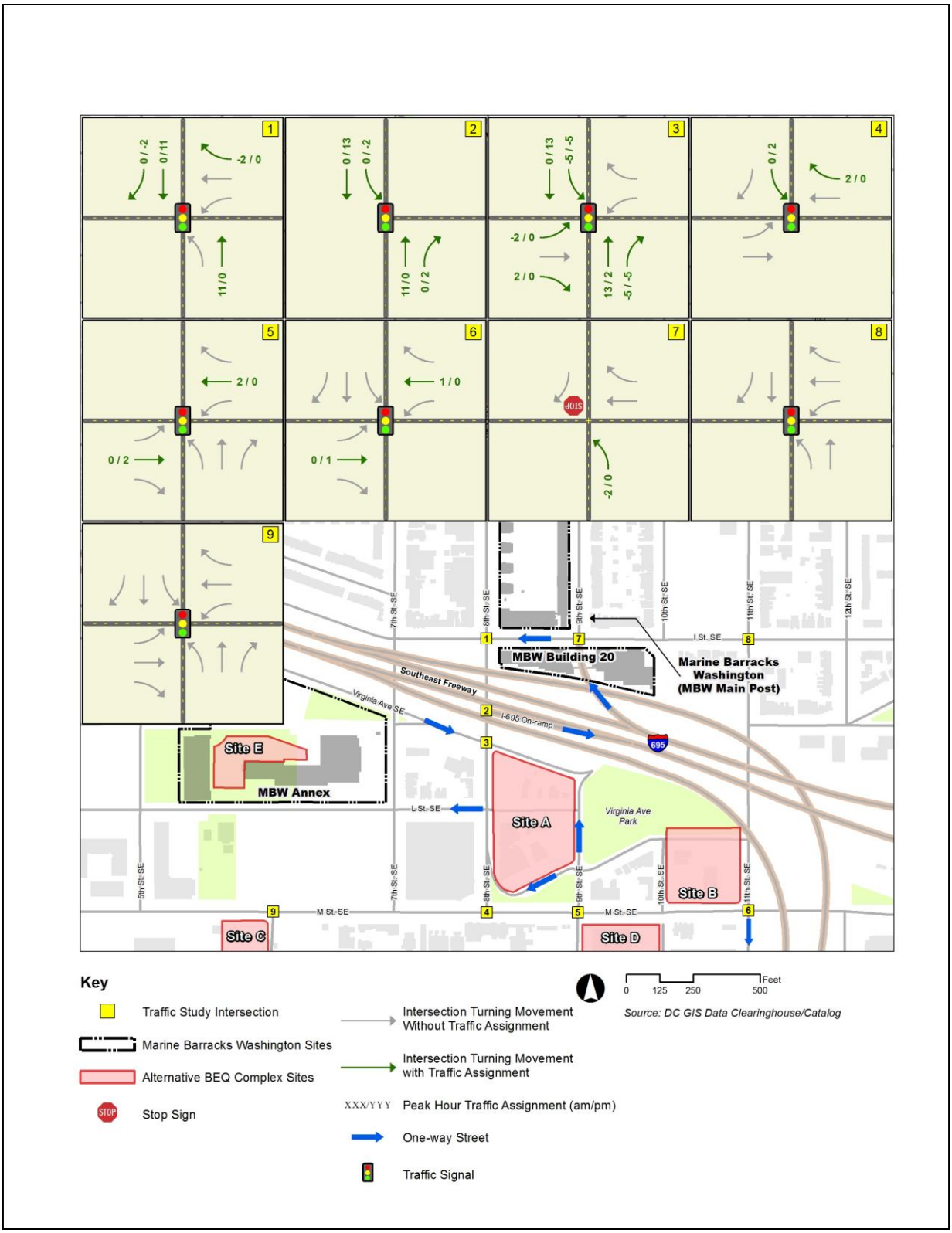


Figure 5-1 Alternative 1 Trip Redistribution and Assignment

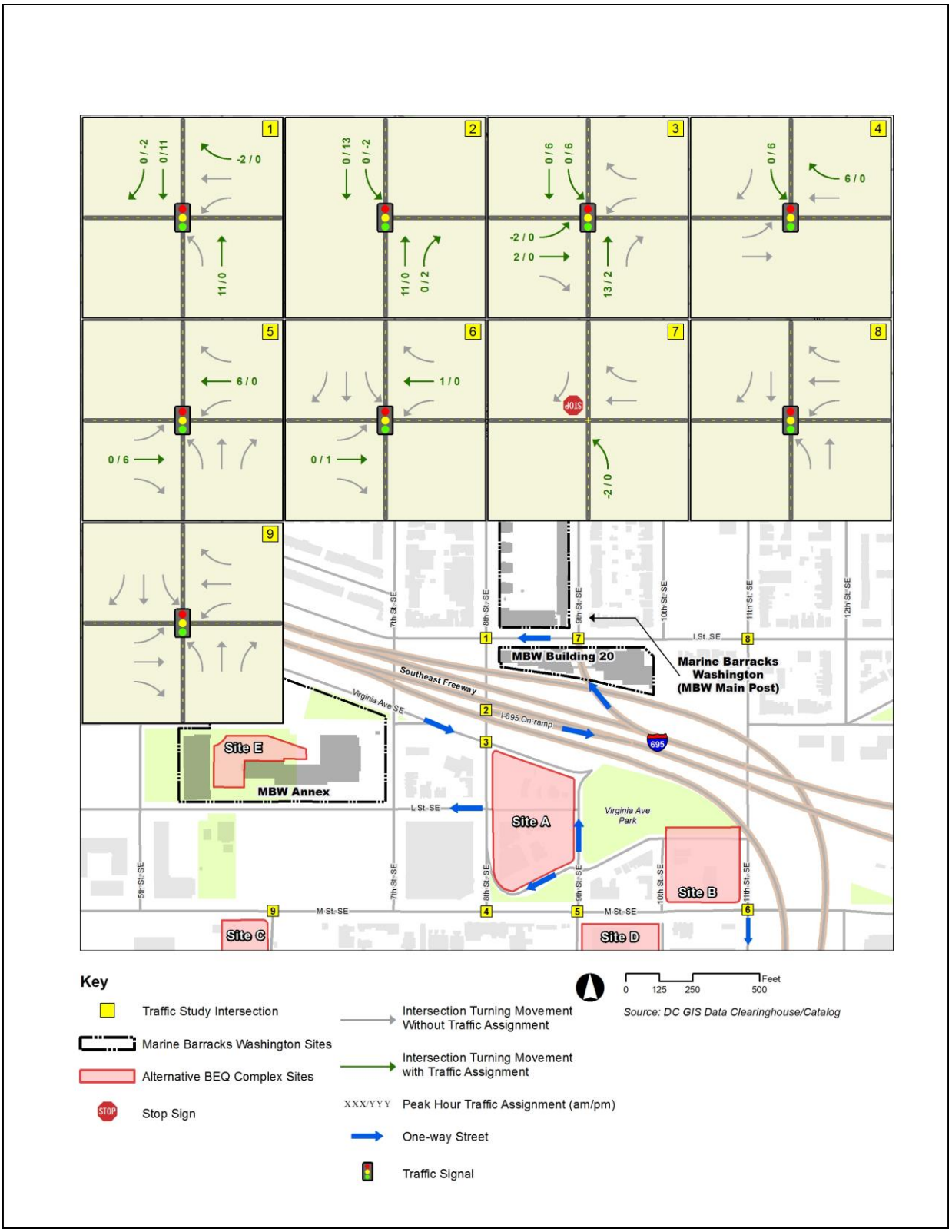


Figure 5-2 Alternative 2 Trip Redistribution and Assignment

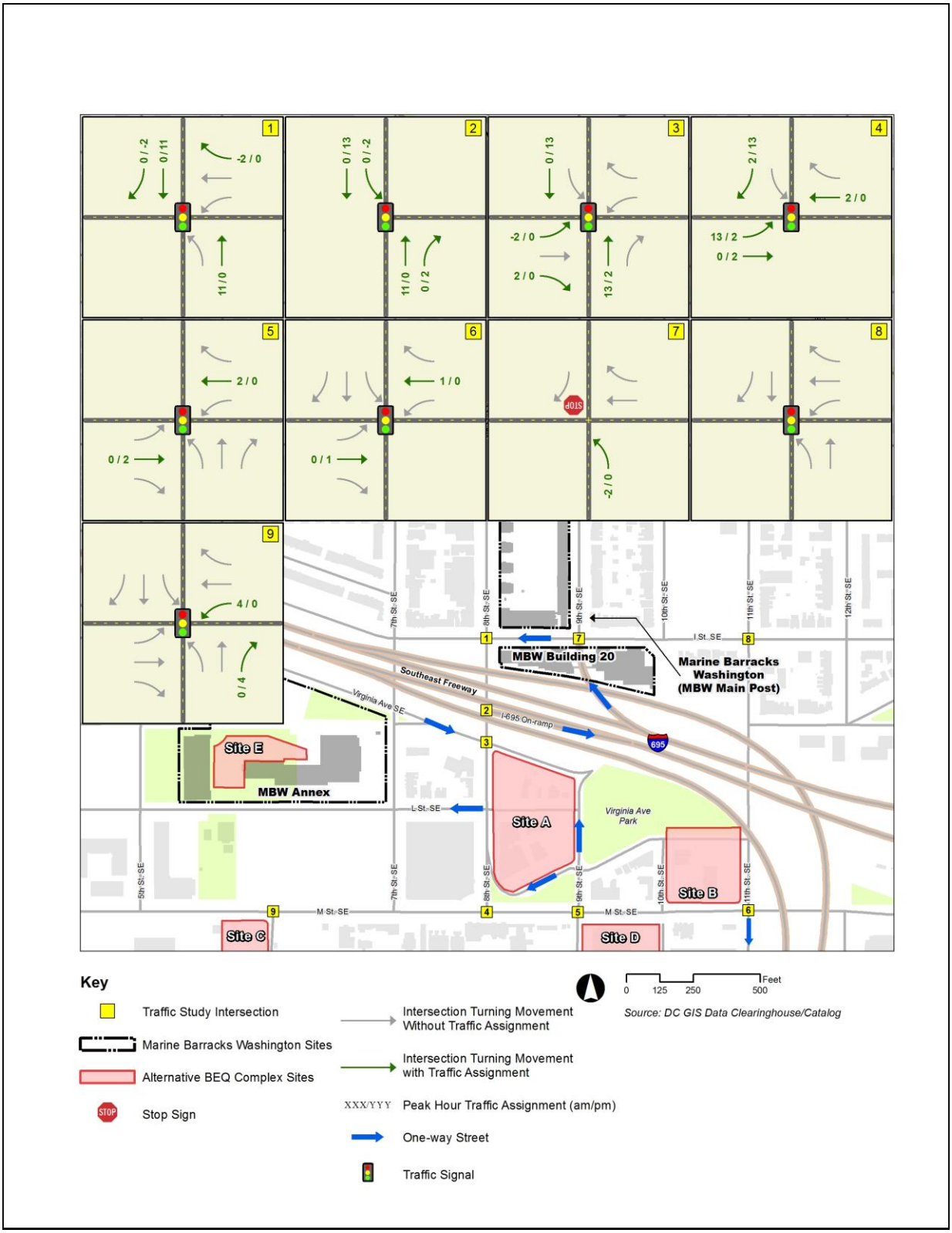


Figure 5-3 Alternative 3 Trip Redistribution and Assignment

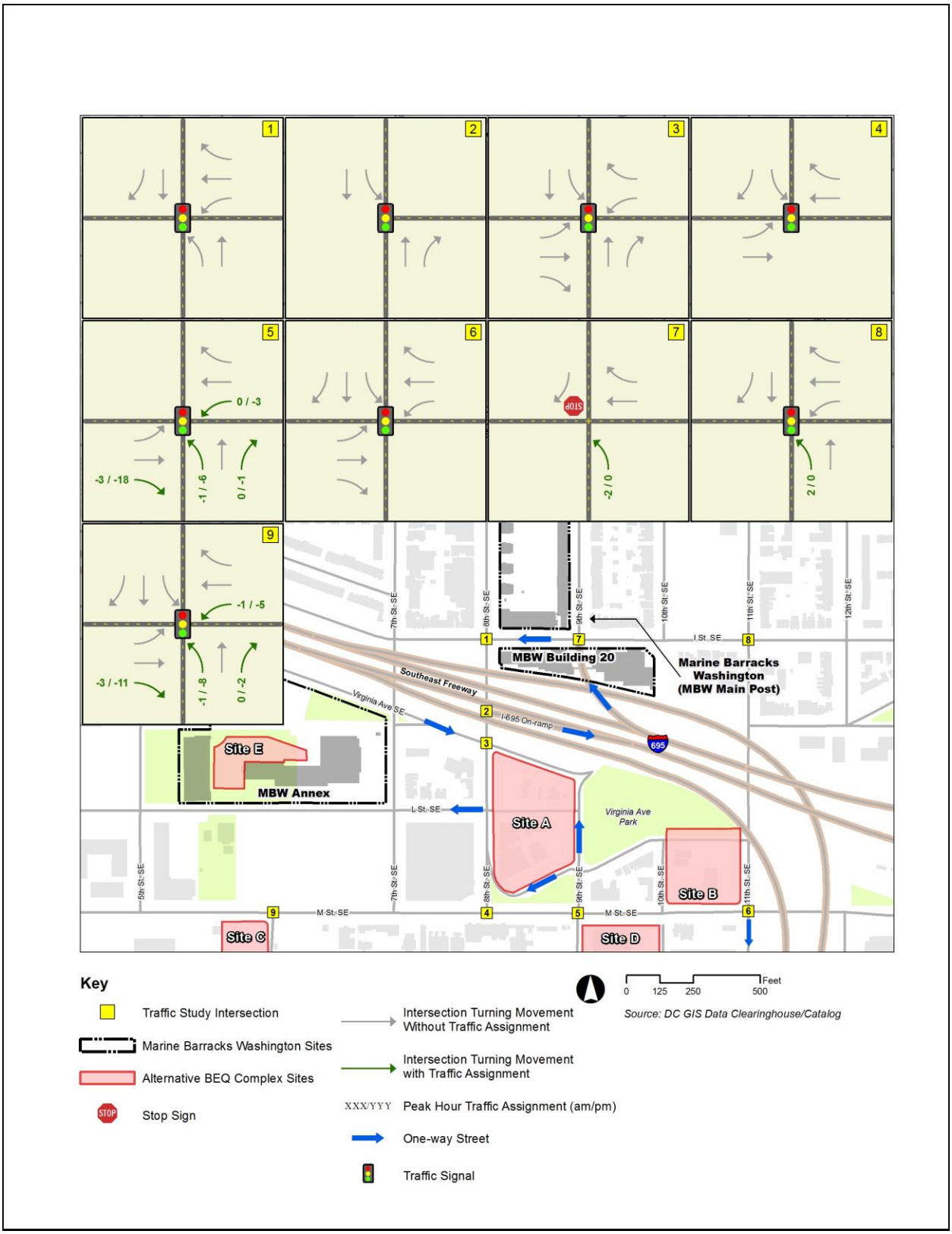


Figure 5-4 Alternative 4 Trip Redistribution and Assignment

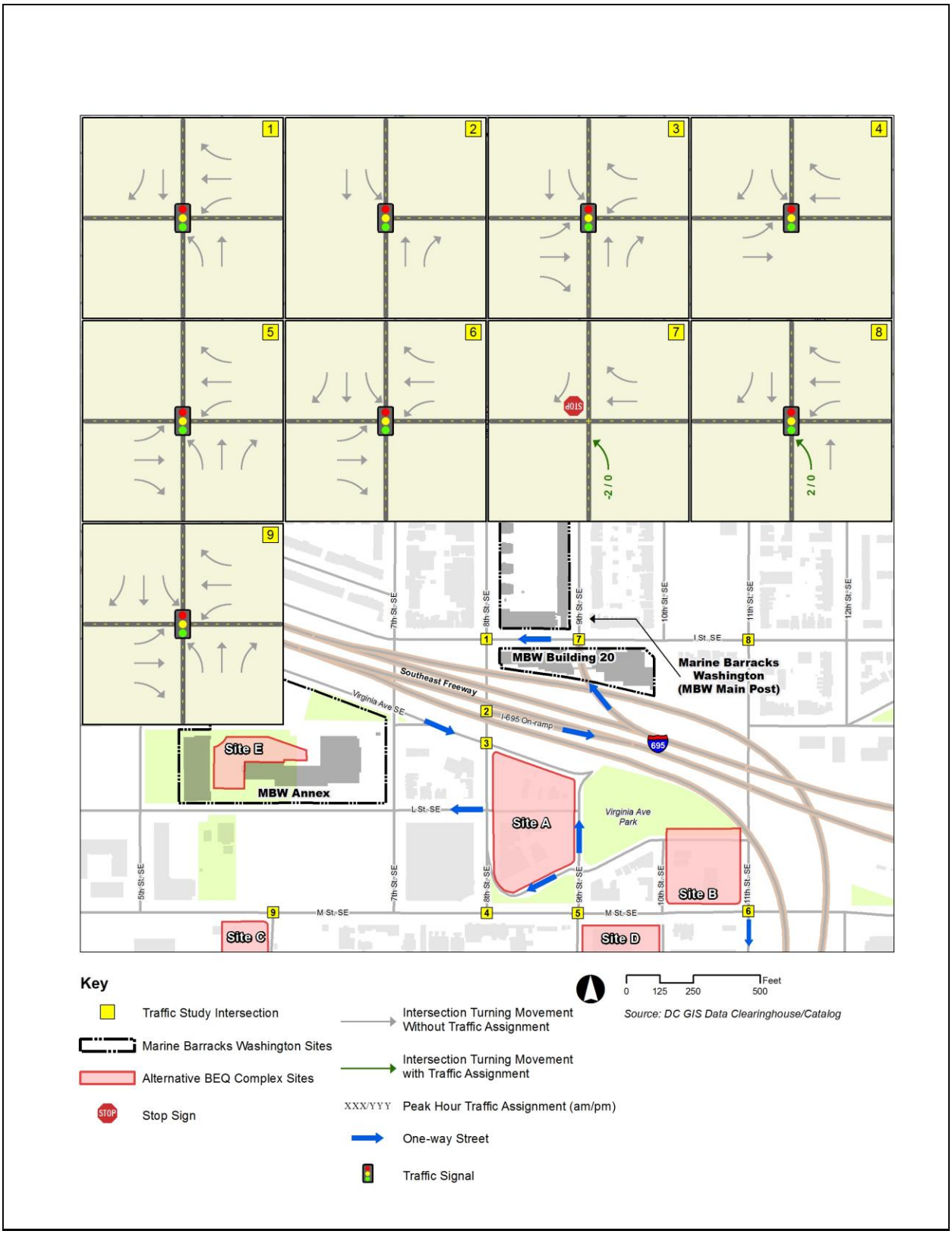


Figure 5-5 Alternative 5 Trip Redistribution and Assignment

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6.0 PROJECT IMPACTS

6.1 ALTERNATIVE 1

6.1.1 Pedestrian and Bicycle Impacts

Alternative 1 would involve the permanent closure of existing sidewalks along L Street SE between 8th Street SE and 9th Street SE. Existing pedestrian and bicycle trips between Virginia Avenue Park and land uses to the west of Site A would have be diverted around the proposed BEQ replacement, resulting in additional travel time and distance (i.e., approximately 700 feet) for these trips. Pedestrian and bicycle trip distance between the proposed BEQ Complex and the Main Post would increase from approximately 500 feet to approximately 800 feet. However, the proposed BEQ replacement would be within "reasonable walking distance," as defined by the National Capital Planning Commission (National Capital Planning Commission [NCPC] 2004); therefore, the additional walking and bicycling distance would not be a significant impact. Military personnel (and some civilian employees) would pass beneath the I-695 overpass and adjacent to the existing surface lot along 8th Street SE.

The following management measures would be implemented:

- Continued implementation of the Transportation Management Plan program for MBW to encourage trip reduction;
- Ongoing training of personnel in pedestrian safety and requirements for Marines to observe all pedestrian signals and rules; and
- Ensuring that design of the BEQ Complex considers the location of proposed driveways and assess the likelihood and extent of queues that may form as vehicles are processed for access to BEQ Complex parking facilities and, to the extent feasible, avoid blockage of through lanes.[3]

In conclusion, the impact of implementation of Alternative 1 to pedestrian and bicycle access would not be significant.

6.1.2 Transit Impacts

Alternative 1 would not involve any obstruction or re-routing of any existing or planned transit service. The relatively minor increase in walking and biking distance could increase the propensity to use public transit under unusual circumstances. However, this possible increase would be negated by the removal of existing occupied land uses within the Site A footprint. The Marine Corps would coordinate with Metro during the replacement BEQ site layout and design to ensure that the proposed design does not interfere with existing and planned transit service, including the location of transit stops and stations. In conclusion, the impact of implementing Alternative 1 to transit services would not be significant.

[3] This measure is not applicable to Alternatives 4 or 5, because parking will be provided at the existing Building 20 parking structure.

6.1.3 Traffic Impacts

Peak hour volumes with Alternative 1 are shown in Figure 6-1. The redistribution and assignment of traffic under Alternative 1 would not result in any significant traffic impact (Table 6-1). Alternative 1 would involve the removal of approximately 23 on-street parallel parking spaces along a portion of L Street SE. However, it is likely that these spaces are used, in part, by existing land uses that would be removed as part of the Proposed Action. In addition to the removal of on-street parking, Alternative 1 would eliminate 212 parking spaces provided at the Building 20 site. The loss of 235 on and off-street parking spaces would be offset by the 212 new off-street parking spaces provided by the replacement BEQ Complex for MBW residents and employees. The result would be a relatively minor net loss of 23 parking spaces; however, the net loss in parking would be offset by a reduction in parking demand due to the demolition of existing occupied land uses within Site A; therefore, the impact would be relatively minor. Although nominal vehicular traffic would access the site during peak commuting hours, inbound vehicles may form queues at project access driveways during off-peak periods. With the application of management measures described above, the long-term adverse impact of implementation of Alternative 1 to traffic would not be significant.

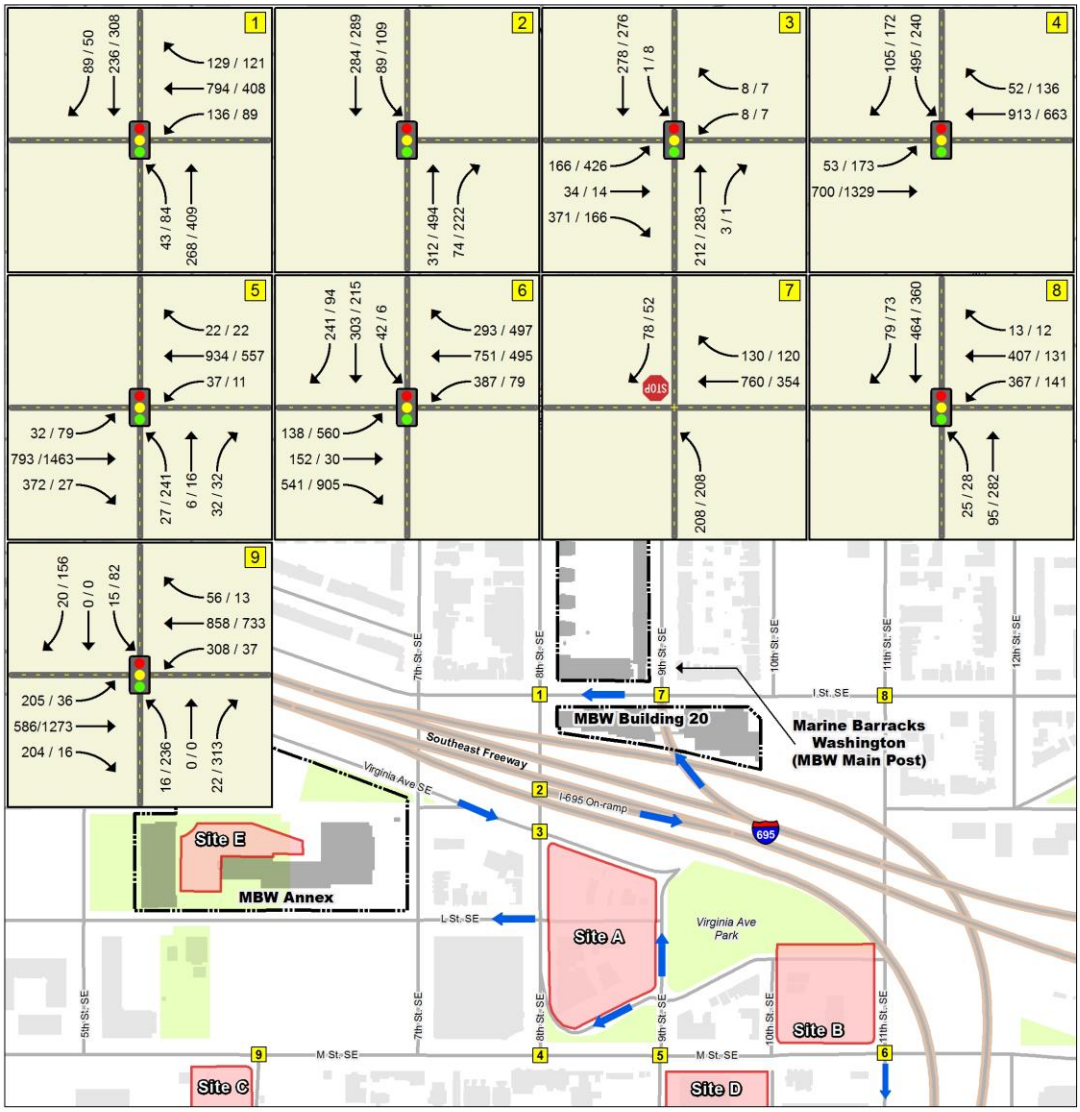

Figure 6-1 Peak Hour Traffic Volumes, Alternative 1

Table 6-1 Summary of Intersection LOS and Project Effects under Alternative 1

Intersection		Peak Hour	No Action		With Alt. 1		Impact	
			Delay[a]	LOS[b]	Delay[a]	LOS[b]	Δ [c]	Significant?
1	I Street SE/8th Street SE	AM	21.8	C	21.8	C	0.0	NO
		PM	20.1	C	20.3	C	0.2	NO
2	I-695 on-ramp/8th Street SE	AM	4.0	A	4.2	A	0.2	NO
		PM	0.6	A	0.6	A	0.0	NO
3	Virginia Avenue SE/8th Street SE	AM	19.0	B	19.2	B	0.2	NO
		PM	22.3	C	22.0	C	-0.3	NO
4	M Street SE/8th Street SE	AM	26.2	C	26.2	C	0.0	NO
		PM	13.4	B	14.2	B	0.8	NO
5	M Street SE/9th Street SE	AM	12.3	B	12.3	B	0.0	NO
		PM	16.9	B	16.9	B	0.0	NO
6	M Street SE/11th Street SE	AM	33.8	C	33.8	C	0.0	NO
		PM	76.7	E	76.7	E	0.0	NO
7	I Street SE/9th Street SE/I-695 off-ramp	AM	19.8	C	19.8	C	0.0	NO
		PM	11.7	B	11.7	B	0.0	NO
8	I Street SE/11th Street SE	AM	20.6	C	20.6	C	0.0	NO
		PM	19.1	B	19.1	B	0.0	NO
9	M Street SE/Isaac Hull Avenue SE	AM	5.1	A	5.1	A	0.0	NO
		PM	24.9	C	24.9	C	0.0	NO

Notes: [a] Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
[b] LOS calculations are based on the methodology in TRB (2010) and performed using Synchro 8.
[c] Change in delay due to traffic redistribution as a result of the Proposed Action.

6.2 ALTERNATIVE 2

6.2.1 Pedestrian and Bicycle Impacts

Although Alternative 2 would permanently close L Street SE between 10th Street SE and 11th Street SE to vehicular traffic, pedestrians and bicyclists would be able to continue to use this roadway. Therefore, the closure would not increase travel time or distance for pedestrian or bicycle trips. Walking and biking trip distance for military personnel from Site B to the Main Post would increase from approximately 500 feet to approximately 1,700 feet. This distance would be within the 2,000 foot "reasonable walking distance" defined by NCPC, and is therefore not a significant impact with respect to pedestrian or bicycle accessibility. Military personnel (and some civilian workers) approaching the main post via 8th Street SE would pass beneath the I-695 freeway. With the application of management measures outlined for Alternative 1, impacts to pedestrian and bicycle accessibility would not be significant under Alternative 2.

6.2.2 Transit Impacts

As with Alternative 1, Alternative 2 would not block or re-route any transit services. The increase in walking and biking distance could increase the use of public transit, particularly during inclement weather. However, increased transit demand would be offset by the removal of existing, occupied land uses to make way for Site B. With the application of the management measures identified for Alternative 1, there would not be a significant impact with implementation of Alternative 2.

6.2.3 Traffic Impacts

Figure 6-2 presents peak hour volumes with Alternative 2, while Table 6-2 summarizes the analysis of peak hour intersection capacity. As shown in Table 6-2, Alternative 2 would not result in any significant traffic impact. (Refer to Attachment B for intersection worksheets). The proposed closure of L Street SE between 10th Street SE and 11th Street SE would remove approximately nine on-street parallel parking spaces. Similar to Alternative 1, the permanent loss of 9 on-street parking spaces along L Street SE would be offset by a reduction in parking demand due to the demolition of existing occupied uses. Therefore, the net loss in parking would be relatively minor. Alternative 2 would provide the same amount of off-street parking that is currently available at the Building 20 site; therefore, the Proposed Action would not cause any net reduction in off-street parking supply. As with Alternative 1, inbound vehicles may form queues at project access driveways during off-peak periods. With the application of the same management measures outlined for Alternative 1, traffic impacts would not be significant under Alternative 2.

Table 6-2 Summary of Intersection LOS and Project Effects under Alternative 2

Intersection		Peak Hour	No Action		With Alt. 2		Impact	
			Delay[a]	LOS[b]	Delay[a]	LOS[b]	Δ [c]	Significant?
1	I Street SE/8th Street SE	AM	21.8	C	21.8	C	0.0	NO
		PM	20.1	C	20.3	C	0.2	NO
2	I-695 on-ramp/8th Street SE	AM	4.0	A	4.2	A	0.2	NO
		PM	0.6	A	0.6	A	0.0	NO
3	Virginia Avenue SE/8th Street SE	AM	19.0	B	19.1	B	0.1	NO
		PM	22.3	C	22.2	C	-0.1	NO
4	M Street SE/8th Street SE	AM	26.2	C	26.2	C	0.0	NO
		PM	13.4	B	14.7	B	1.3	NO
5	M Street SE/9th Street SE	AM	12.3	B	12.4	B	0.1	NO
		PM	16.9	B	17.0	B	0.1	NO
6	M Street SE/11th Street SE	AM	33.8	C	33.8	C	0.0	NO
		PM	76.7	E	76.7	E	0.0	NO
7	I Street SE/9th Street SE/I-695 off-ramp	AM	19.8	C	19.8	C	0.0	NO
		PM	11.7	B	11.7	B	0.0	NO
8	I Street SE/11th Street SE	AM	20.6	C	20.6	C	0.0	NO
		PM	19.1	B	19.1	B	0.0	NO
9	M Street SE/Isaac Hull Avenue SE	AM	5.1	A	5.1	A	0.0	NO
		PM	24.9	C	24.9	C	0.0	NO

Notes: [a] Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
[b] LOS calculations are based on the methodology in TRB (2010) and performed using Synchro 8.
[c] Change in delay due to traffic redistribution as a result of the Proposed Action.

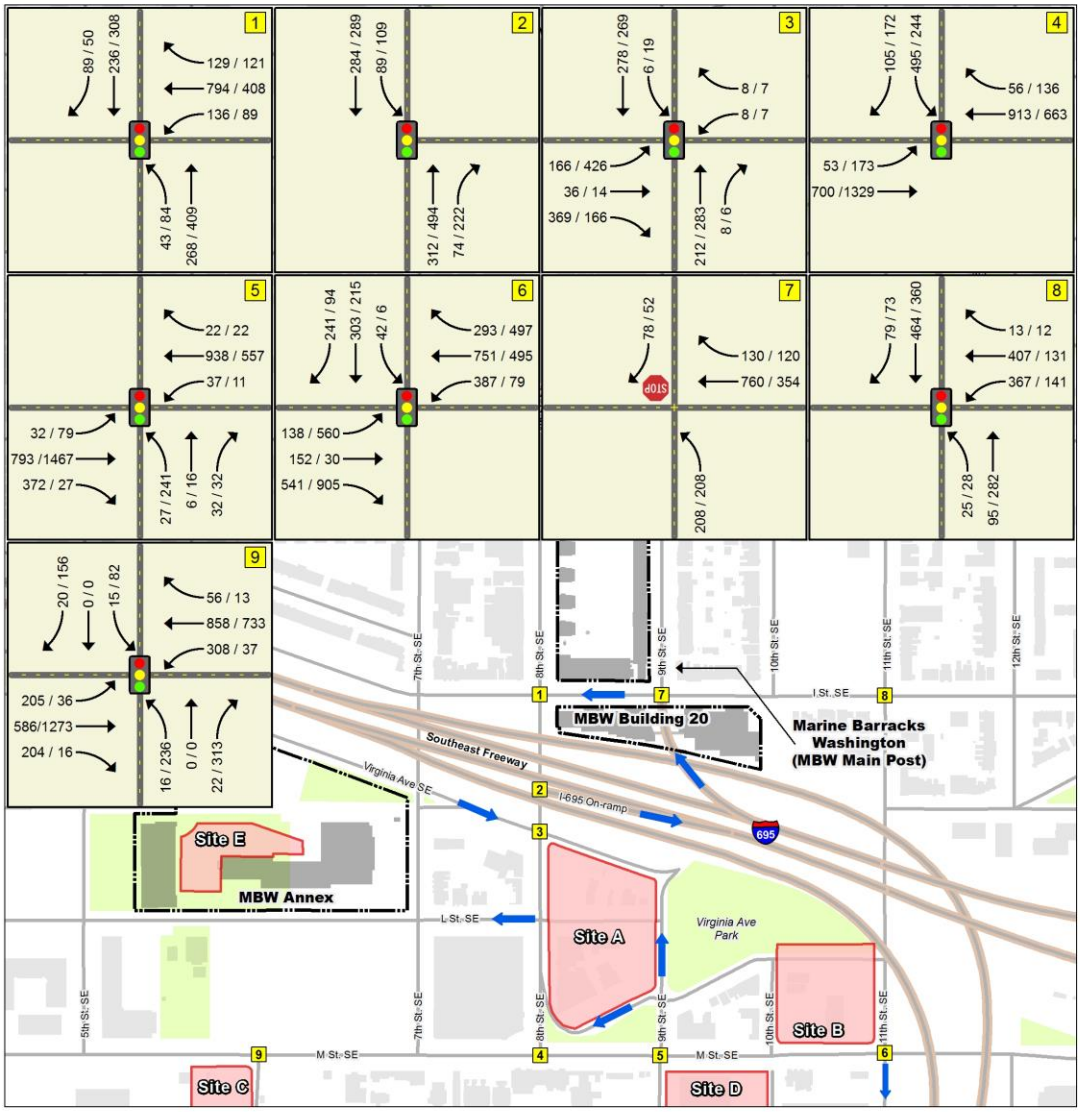

Figure 6-2 Peak Hour Traffic Volumes, Alternative 2

6.3 ALTERNATIVE 3

6.3.1 Pedestrian and Bicycle Impacts

Unlike Alternatives 1 and 2, Alternative 3 would not involve any street closure; therefore, Site C would not result in any changes to existing walking and biking trip patterns. The distance between the BEQ and the Main Post would increase from approximately 500 feet to approximately 2,000 feet, and military personnel (and some civilian workers) would have to cross M Street SE and pass beneath I-695 along 7th Street SE and/or 8th Street SE to access the Main Post. The walking and bicycling distance is equal to the "reasonable walking distance" defined by NCPC. With the implementation of management measures, impacts on pedestrian and bicycle access and circulation would not be significant under Alternative 3.

6.3.2 Transit Impacts

As with the preceding alternatives, Alternative 3 would not obstruct or re-route any transit services. The increase in walking and biking distance may increase the propensity to use public transit, especially during inclement weather. Because no occupied land uses would be demolished, an increase in transit use would likely occur. Military personnel would likely use the WMATA Union Station – Navy Yard Metro Circulator route, which provides local bus service along M Street SE and 8th Street SE. Bus stops are located adjacent to Site C and near the intersection of 8th Street SE and G Street SE, next to the Main Post. However, given the number of military personnel travelling during the peak hour and the availability of transit services in the area, this increase is expected to be relatively minor. With the implementation of management measures, impacts to transit services would not be significant under Alternative 3.

6.3.3 Traffic Impacts

Peak hour volumes under Alternative 3 are shown in Figure 6-3; while Table 6-3 presents intersection analysis results. As shown in this table, Alternative 3's traffic impacts would not be significant. (Refer to Attachment B for intersection worksheets). Proposed off-street parking supply would be identical to the number of spaces currently provided at Building 20; therefore, there would be no net increase in parking demand. As with the preceding alternatives, inbound vehicles may form queues at project access driveways during off-peak periods. With the implementation of management measures, impacts to traffic would not be significant under Alternative 3.

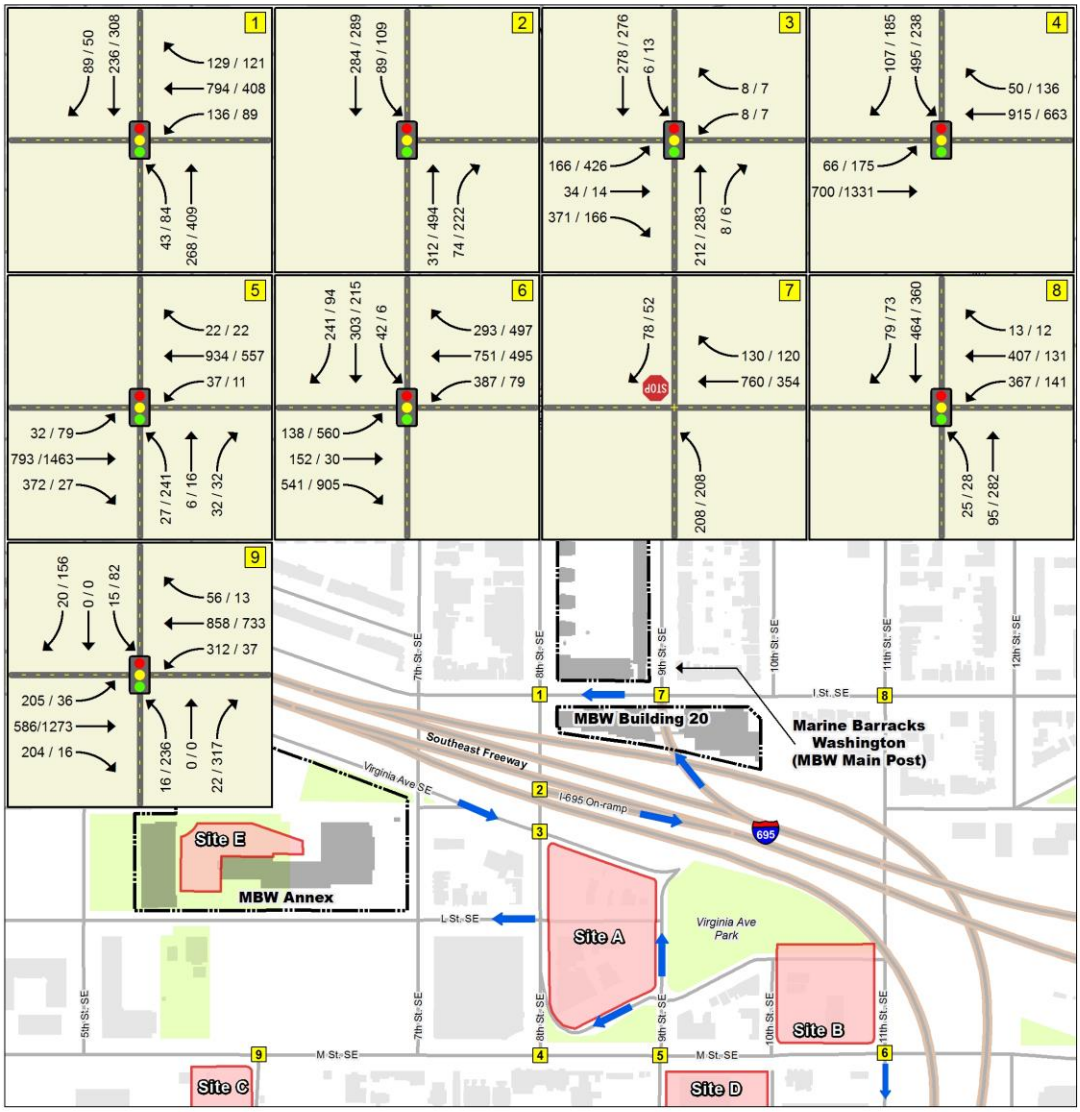

Figure 6-3 Peak Traffic Volumes, Alternative 3

6.4 ALTERNATIVE 4

6.4.1 Pedestrian and Bicycle Impacts

Alternative 4 would not close any existing pedestrian or bicycle facilities; therefore, there would be no change in existing walking or biking routes. Trip distance for military personnel from Site D to the Main Post would increase from approximately 500 feet to approximately 1,700 feet, which remains within the "reasonable walking distance" defined by NCPC. Military personnel (and some civilian workers) approaching the Main Post via 8th Street SE would have to cross M Street SE and pass beneath the I-695 freeway. With the application of management measures, impacts to pedestrian and bicycle accessibility would not be significant under Alternative 4.

6.4.2 Transit Impacts

As with preceding alternatives, Alternative 4 would not block or re-route any transit services. The increase in walking and biking distance could increase transit demand, particularly during harsh weather conditions. However, given the number of military personnel travelling during the peak hour, and considering the availability of several transit routes in the area, this increase is expected to be relatively minor. With the application of management measures, impact to transit services would not be significant under Alternative 4.

6.4.3 Traffic Impacts

Peak hour traffic volumes under Alternative 4 are displayed in Figure 6-4. As shown in Table 6-4, Alternative 4 would not result in any significant traffic impacts. (Refer to Attachment B for intersection worksheets). The planned reconfiguration of the I-695 off-ramp to I Street SE would cause some existing employee trips to divert to the I Street SE/11th Street SE intersection. However, this additional traffic would not result in any change in delay at this intersection, as compared to the No Action Alternative. The removal of existing trips due to the demolition of an existing building at Site D would result in a minor beneficial traffic impact at the M Street SE intersections with Isaac Hull Avenue SE and 9th Street SE. Parking would continue to be provided at Building 20, and therefore parking conditions would be the same as under the No Action Alternative. With the application of management measures described above for Alternative 1[4], the impact to traffic would not be significant under Alternative 4.

[4] Because Alternative 4 would provide parking within the existing Building 20 parking structure, the management measure related to queuing and storage at garage access driveways is not applicable to this alternative.

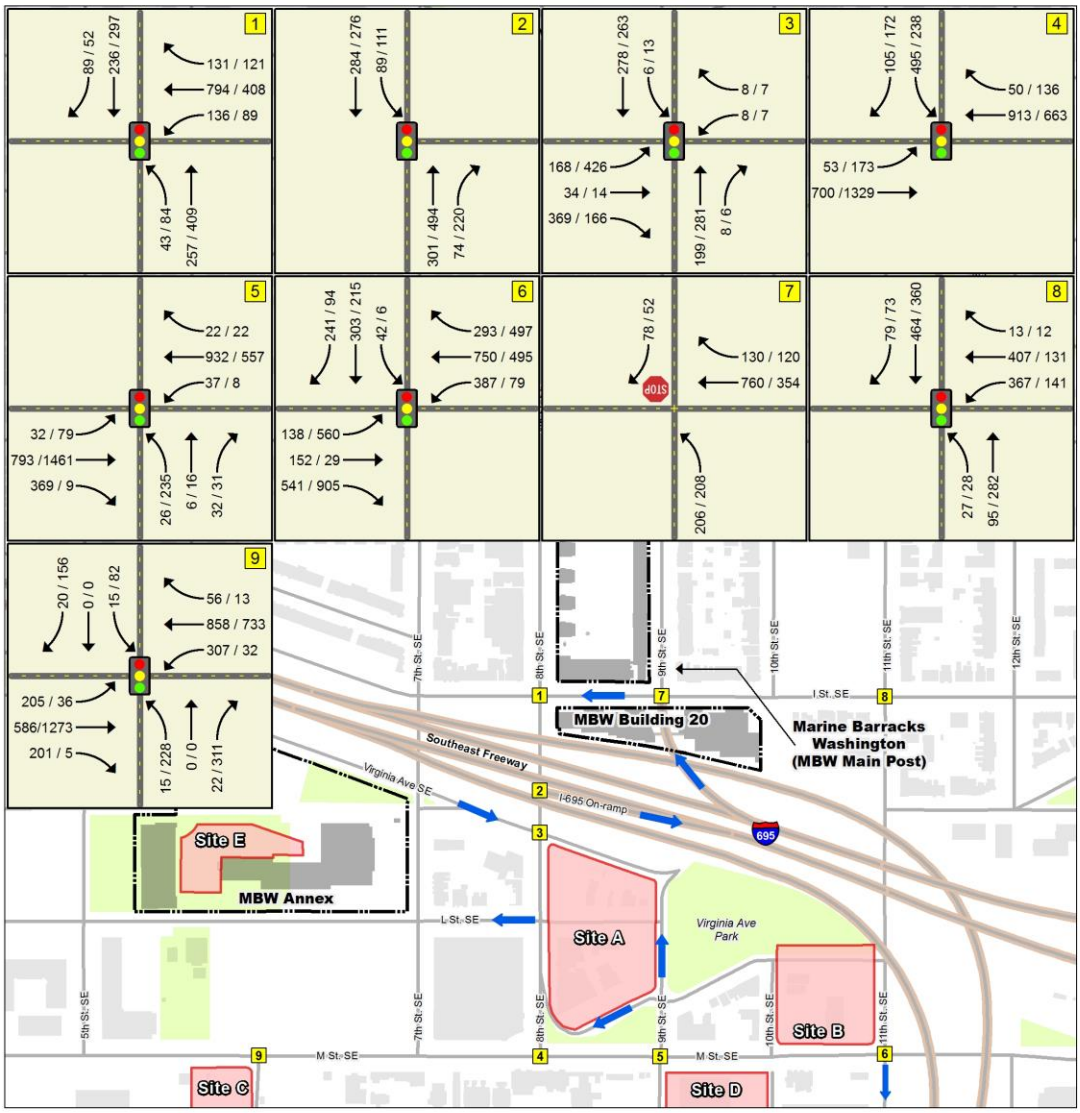

Figure 6-4 Peak Hour Traffic Volumes, Alternative 4

Table 6-4 Summary of Intersection LOS and Project Effects under Alternative 4

Intersection		Peak Hour	No Action		With Alt. 4		Impact	
			Delay[a]	LOS[b]	Delay[a]	LOS[b]	Δ [c]	Significant?
1	I Street SE/8th Street SE	AM	21.8	C	21.8	C	0.0	NO
		PM	20.1	C	20.1	C	0.0	NO
2	I-695 on-ramp/8th Street SE	AM	4.0	A	4.0	A	0.0	NO
		PM	0.6	A	0.6	A	0.0	NO
3	Virginia Avenue SE/8th Street SE	AM	19.0	B	19.0	B	0.0	NO
		PM	22.3	C	22.3	C	0.0	NO
4	M Street SE/8th Street SE	AM	26.2	C	26.2	C	0.0	NO
		PM	13.4	B	13.4	B	0.0	NO
5	M Street SE/9th Street SE	AM	12.3	B	12.3	B	0.0	NO
		PM	16.9	B	16.5	B	-0.4	NO
6	M Street SE/11th Street SE	AM	33.8	C	33.8	C	0.0	NO
		PM	76.7	E	76.7	E	0.0	NO
7	I Street SE/9th Street SE/I-695 off-ramp	AM	19.8	C	19.8	C	0.0	NO
		PM	11.7	B	11.7	B	0.0	NO
8	I Street SE/11th Street SE	AM	20.6	C	20.6	C	0.0	NO
		PM	19.1	B	19.1	B	0.0	NO
9	M Street SE/Isaac Hull Avenue SE	AM	5.1	A	5.1	A	0.0	NO
		PM	24.9	C	23.6	C	-1.3	NO

Notes: [a] Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.

[b] LOS calculations are based on the methodology in TRB (2010) and performed using Synchro 8.

[c] Change in delay due to traffic redistribution as a result of the Proposed Action.

6.5 ALTERNATIVE 5

6.5.1 Pedestrian and Bicycle Impacts

Alternative 5 would not close any existing pedestrian or bicycle facilities; therefore, there would be no change in existing walking or biking routes. Trip distance for military personnel from Site E to the Main Post would increase from approximately 600 feet to approximately 1,800 feet, which remains within the "reasonable walking distance" defined by NCPC. Military personnel (and some civilian workers) approaching the Main Post via 7th Street SE and 8th Street SE would pass beneath the I-695 freeway. With the application of management measures, impacts to pedestrian and bicycle accessibility would not be significant under Alternative 5.

6.5.2 Transit Impacts

As with preceding alternatives, Alternative 5 would not block or re-route any transit services. The increase in walking and biking distance could increase transit demand, particularly during harsh weather conditions. However, given the number of military personnel travelling during the peak hour, and considering the availability of several transit routes in the area, this increase is expected to be relatively minor. With the application of management measures, impact to transit services would not be significant under Alternative 5.

6.5.3 Traffic Impacts

Peak hour traffic volumes under Alternative 5 are displayed in Figure 6-5. As shown in Table 6-5, Alternative 5 would not result in any significant traffic impacts. (Refer to Attachment B for intersection worksheets). The planned reconfiguration of the I-695 off-ramp to I Street SE would cause some existing employee trips to divert to the I Street SE/11th Street SE intersection. However, this additional traffic would not result in any change in delay at this intersection, as compared to the No Action Alternative. Parking would continue to be provided at Building 20, and therefore parking conditions would be the same as under the No Action Alternative. With the application of management measures described above for Alternative 1[5], the impact to traffic would not be significant under Alternative 5.

[5] Because Alternative 5 would provide parking within the existing Building 20 parking structure, the management measure related to queuing and storage at garage access driveways is not applicable to this alternative.

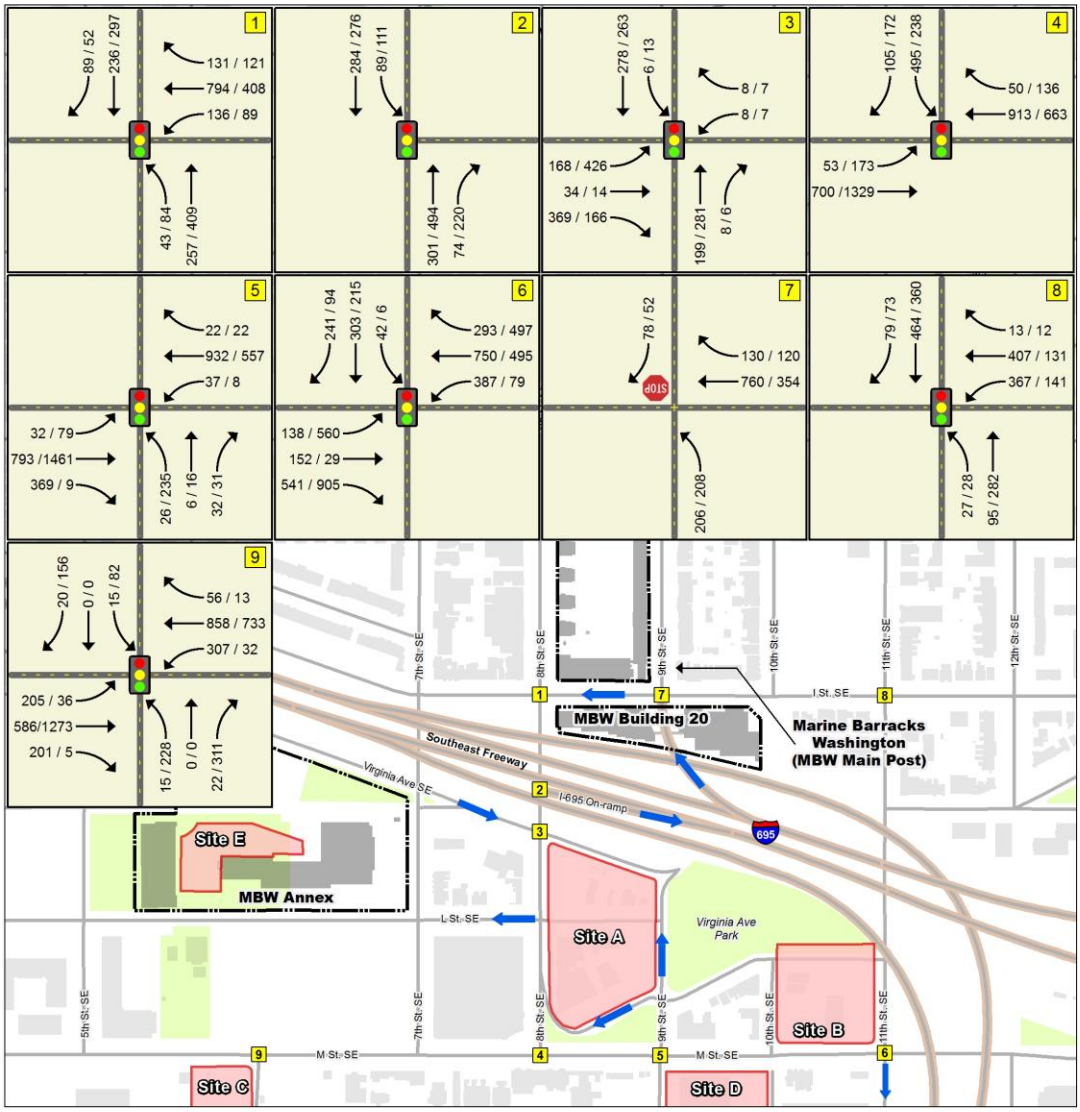

Figure 6-5 Peak Hour Traffic Volumes, Alternative 5

Table 6-5 Summary of Intersection LOS and Project Effects under Alternative 5

Intersection		Peak Hour	No Action		With Alt. 5		Impact	
			Delay[a]	LOS[b]	Delay[a]	LOS[b]	Δ [c]	Significant?
1	I Street SE/8th Street SE	AM	21.8	C	21.8	C	0.0	NO
		PM	20.1	C	20.1	C	0.0	NO
2	I-695 on-ramp/8th Street SE	AM	4.0	A	4.0	A	0.0	NO
		PM	0.6	A	0.6	A	0.0	NO
3	Virginia Avenue SE/8th Street SE	AM	19.0	B	19.0	B	0.0	NO
		PM	22.3	C	22.3	C	0.0	NO
4	M Street SE/8th Street SE	AM	26.2	C	26.2	C	0.0	NO
		PM	13.4	B	13.4	B	0.0	NO
5	M Street SE/9th Street SE	AM	12.3	B	12.3	B	0.0	NO
		PM	16.9	B	16.9	B	0.0	NO
6	M Street SE/11th Street SE	AM	33.8	C	33.8	C	0.0	NO
		PM	76.7	E	76.7	E	0.0	NO
7	I Street SE/9th Street SE/I-695 off-ramp	AM	19.8	C	19.8	C	0.0	NO
		PM	11.7	B	11.7	B	0.0	NO
8	I Street SE/11th Street SE	AM	20.6	C	20.6	C	0.0	NO
		PM	19.1	B	19.1	B	0.0	NO
9	M Street SE/Isaac Hull Avenue SE	AM	5.1	A	5.1	A	0.0	NO
		PM	24.9	C	24.9	C	0.0	NO

Notes: [a] Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.

[b] LOS calculations are based on the methodology in TRB (2010) and performed using Synchro 8.

[c] Change in delay due to traffic redistribution as a result of the Proposed Action.

6.6 CONSTRUCTION IMPACTS

Implementation of any action alternative would involve temporary traffic impacts resulting from demolition and construction activities. The following types of additional trips are expected be added to the highway network:

- Construction worker commuting trips;
- Trips involving the delivery and removal of construction equipment and materials; and
- Trips involving the removal of demolition debris and excess fill material.

These trips would be associated primarily with the BEQ Complex replacement project. However, construction traffic would also be associated with the Main Post renovation projects and project to foster integrated communities.

Section 2.2.2 of the MBW EIS describes various measures that will be implemented by the Marine Corps to lessen potential construction-related neighborhood impacts. One of these measures includes not scheduling deliveries of supplies or materials during peak commuting periods (i.e., 6 AM to 9 AM and 3 PM to 6 PM) to lessen impacts to traffic. Given this measure, considering the temporary nature of construction traffic, and accounting for adequate intersection LOS at most ROI intersections, construction related impacts are not expected to be significant.

6.7 FUTURE ELEMENTS ADDRESSED PROGRAMMATICALLY

Certain future activities (potential reuse of the approximately 1.56-acre Building 20 site, renovation of Building 9, and select landscaping and maintenance projects) are anticipated, but there is not sufficient information to conduct a detailed NEPA review of these elements at this time. Of these elements, the reuse of Building 20 has the greatest potential for transportation-related impacts, given the size of the building and the range of reuse options being considered. Once sufficient information becomes available, it will be necessary to estimate the traffic generation of the Building 20 site (and the renovated Building 9 if any expansion or increase in personnel is proposed), to assess the likely travel patterns to and from this facility, and to scope a multi-modal transportation impact analysis based on this pattern. This document can be prepared as an appendix to the appropriate NEPA documentation.

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7.0 FINDINGS AND RECOMMENDATIONS

The Proposed Action would accommodate existing land uses and activities, described in Section 2.3, that are already occurring near the MBW Main Post. Therefore, the Proposed Action would not generate any new trips on a recurring basis. Instead, existing trips already on the transportation network would shift from their current routes, as appropriate, to travel between proposed BEQ Complex replacement and the Main Post. Minor transportation impacts would be anticipated from the permanent closure of existing public streets (i.e., Alternatives 1 and 2) and the demolition of existing, occupied land uses (i.e., Alternatives 1, 2, and 4). The Proposed Action's transportation effects were determined based on the capacity of the transportation network to accommodate the redistribution, diversion, and removal of existing and project-related trips. The analysis found that none of the alternatives would cause any significant impacts, either during construction or operation of the Proposed Action. Although no measures are required to minimize the Proposed Action's effect on pedestrian and bicycle accessibility, transit service, or traffic, the following management measures are recommended for all alternatives:

- Continued implementation of the Transportation Management Plan program for MBW to encourage trip reduction; and
- Ongoing training of personnel in pedestrian safety and requirements for Marines to observe all pedestrian signals and rules.

Because Alternatives 1 through 3 would involve the construction of new parking facilities for the proposed BEQ Complex, the following additional management measure is recommended:

- Ensuring that design of the BEQ Complex considers the location of proposed driveways and assess the likelihood and extent of queues that may form as vehicles are processed for access to BEQ Complex parking facilities and, to the extent feasible, avoid blockage of through lanes.

8.0 REFERENCES

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Attachment A

Excerpts from the Transportation Management Program

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MAJOR ROADWAYS IN MBW VICINITY

Marine Barracks Washington (MBW)
Transportation Management Program

Figure 5

METRORAIL & BUS ROUTES IN MBW VICINITY

Marine Barracks Washington (MBW)
Transportation Management Program

Figure 2

Key

Metrorail
- Blue Line
- Green Line
- Orange Line
- Red Line
- Yellow Line
- Metrorail Station

DC Circulator
- Blue Route
- Green Route
- Orange Route
- Purple Route
- Yellow Route

- Metrobus Route
- Metrobus Stop
- 2,000 ft Walking Radius
- Neighborhood Streets
- MBW Sites

BIKE ROUTES & FACILITIES
MBW VICINITY
Marine Barracks Washington (MBW)
Transportation Management Program

Figure 4

Key

- Existing Bike Lane
- Proposed Bike Lane
- Signed Bike Route
- Capital Bikeshare Location
- 2,000 ft Walking Radius
- MBW Sites

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Attachment B

Intersection Worksheets

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Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	0	930	125	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1033	139	0	83

Major/Minor	Major2		Minor2	
Conflicting Flow All	-	0	1103	1103
Stage 1	-	-	1103	-
Stage 2	-	-	0	-
Critical Hdwy	-	-	7.12	6.22
Critical Hdwy Stg 1	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	189	257
Stage 1	-	-	256	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	189	257
Mov Cap-2 Maneuver	-	-	189	-
Stage 1	-	-	256	-
Stage 2	-	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	25.6
HCM LOS		D

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	257
HCM Lane V/C Ratio	-	-	0.324
HCM Control Delay (s)	-	-	25.6
HCM Lane LOS	-	-	D
HCM 95th %tile Q(veh)	-	-	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	352	391	13	24	92	0	0	446	76
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				391	434	14	27	102	0	0	496	84
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				825	866	720	308	885	0	0	885	736
Arrive On Green				0.47	0.47	0.46	0.47	0.47	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1774	1863	1583	831	1863	0	0	1863	1583
Grp Volume(v), veh/h				391	434	14	27	102	0	0	496	84
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	831	1863	0	0	1863	1583
Q Serve(g_s), s				15.1	16.3	0.5	2.4	3.0	0.0	0.0	19.1	3.0
Cycle Q Clear(g_c), s				15.1	16.3	0.5	21.5	3.0	0.0	0.0	19.1	3.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				825	866	720	308	885	0	0	885	736
V/C Ratio(X)				0.47	0.50	0.02	0.09	0.12	0.00	0.00	0.56	0.11
Avail Cap(c_a), veh/h				825	866	720	308	885	0	0	885	736
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.4	18.7	15.0	26.5	14.6	0.0	0.0	18.8	15.1
Incr Delay (d2), s/veh				2.0	2.1	0.0	0.6	0.3	0.0	0.0	2.6	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.8	8.8	0.2	0.6	1.6	0.0	0.0	10.4	1.4
LnGrp Delay(d),s/veh				20.3	20.7	15.0	27.0	14.8	0.0	0.0	21.3	15.4
LnGrp LOS				C	C	B	C	B			C	B
Approach Vol, veh/h					839			129			580	
Approach Delay, s/veh					20.4			17.4			20.5	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				23.5		18.3		21.1
Green Ext Time (p_c), s				4.3		2.7		4.5

Intersection Summary		
HCM 2010 Ctrl Delay		20.2
HCM 2010 LOS		C

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	354	130	208	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	393	144	231	0	0

Major/Minor			Major2			Major1		
Conflicting Flow All			0	0	0	538	0	0
Stage 1			-	-	-	-	-	-
Stage 2			-	-	-	-	-	-
Critical Hdwy			-	-	-	4.12	-	-
Critical Hdwy Stg 1			-	-	-	-	-	-
Critical Hdwy Stg 2			-	-	-	-	-	-
Follow-up Hdwy			-	-	-	2.218	-	-
Pot Cap-1 Maneuver			-	-	-	1030	-	-
Stage 1			-	-	-	-	-	-
Stage 2			-	-	-	-	-	-
Platoon blocked, %				-	-		-	-
Mov Cap-1 Maneuver			-	-	-	1030	-	-
Mov Cap-2 Maneuver			-	-	-	-	-	-
Stage 1			-	-	-	-	-	-
Stage 2			-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	9.5
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1030	-	-	-	-	-	597
HCM Lane V/C Ratio	0.224	-	-	-	-	-	0.097
HCM Control Delay (s)	9.5	-	-	0	-	-	11.7
HCM Lane LOS	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	-	-	0.3

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	52
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	58

Major/Minor	Minor2		
Conflicting Flow All	466	928	466
Stage 1	466	466	-
Stage 2	0	462	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	555	268	597
Stage 1	632	562	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	431	0	597
Mov Cap-2 Maneuver	431	0	-
Stage 1	632	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	11.7
HCM LOS	B

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	89	408	121	84	409	0	0	297	52
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.94	1.00		1.00	1.00		0.95
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				99	453	134	93	454	0	0	330	58
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				253	1224	596	152	700	0	0	810	142
Arrive On Green				0.41	0.41	0.40	0.53	0.53	0.00	0.00	0.53	0.52
Sat Flow, veh/h				617	2985	1490	208	1322	0	0	1529	269
Grp Volume(v), veh/h				294	258	134	547	0	0	0	0	388
Grp Sat Flow(s),veh/h/ln				1832	1770	1490	1530	0	0	0	0	1798
Q Serve(g_s), s				11.3	10.1	5.9	15.5	0.0	0.0	0.0	0.0	13.0
Cycle Q Clear(g_c), s				11.3	10.1	5.9	28.4	0.0	0.0	0.0	0.0	13.0
Prop In Lane				0.34		1.00	0.17		0.00	0.00		0.15
Lane Grp Cap(c), veh/h				751	726	596	853	0	0	0	0	953
V/C Ratio(X)				0.39	0.36	0.22	0.64	0.00	0.00	0.00	0.00	0.41
Avail Cap(c_a), veh/h				751	726	596	853	0	0	0	0	953
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				20.7	20.4	19.8	17.8	0.0	0.0	0.0	0.0	14.1
Incr Delay (d2), s/veh				1.5	1.4	0.9	3.7	0.0	0.0	0.0	0.0	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.0	5.1	2.6	12.1	0.0	0.0	0.0	0.0	6.7
LnGrp Delay(d),s/veh				22.3	21.7	20.7	21.5	0.0	0.0	0.0	0.0	15.4
LnGrp LOS				C	C	C	C					B
Approach Vol, veh/h					686			547			388	
Approach Delay, s/veh					21.8			21.5			15.4	
Approach LOS					C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				56.0		44.0		56.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				51.0		39.0		51.0
Max Q Clear Time (g_c+I1), s				30.4		13.3		15.0
Green Ext Time (p_c), s				4.4		0.0		4.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	494	220	111	276
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			549	244	123	307
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1151	512	62	132
Arrive On Green			1.00	1.00	1.00	1.00
Sat Flow, veh/h			1212	539	16	136
Grp Volume(v), veh/h			0	793	430	0
Grp Sat Flow(s),veh/h/ln			0	1750	153	0
Q Serve(g_s), s			0.0	0.0	1.5	0.0
Cycle Q Clear(g_c), s			0.0	0.0	1.5	0.0
Prop In Lane				0.31	0.29	
Lane Grp Cap(c), veh/h			0	1663	0	0
V/C Ratio(X)			0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h			0	1663	0	0
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh			0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh			0.0	1.0	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			793			430
Approach Delay, s/veh			1.0			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				2.0				3.5
Green Ext Time (p_c), s				8.6				8.7

Intersection Summary	
HCM 2010 Ctrl Delay	0.6
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	426	14	166	7	0	7	0	281	6	13	263	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.90	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	473	16	184	8	0	8	0	312	7	14	292	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	724	875	740	357	17	320	0	452	10	38	456	0
Arrive On Green	0.47	0.47	0.47	0.47	0.00	0.47	0.00	0.25	0.25	0.43	0.43	0.00
Sat Flow, veh/h	1402	1863	1575	645	36	682	0	1810	41	2	1059	0
Grp Volume(v), veh/h	473	16	184	16	0	0	0	0	319	306	0	0
Grp Sat Flow(s),veh/h/ln	1402	1863	1575	1363	0	0	0	0	1850	1061	0	0
Q Serve(g_s), s	27.3	0.5	7.0	0.0	0.0	0.0	0.0	0.0	15.6	11.7	0.0	0.0
Cycle Q Clear(g_c), s	27.8	0.5	7.0	0.5	0.0	0.0	0.0	0.0	15.6	11.7	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.02	0.05		0.00
Lane Grp Cap(c), veh/h	724	875	740	695	0	0	0	0	463	0	0	0
V/C Ratio(X)	0.65	0.02	0.25	0.02	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.00
Avail Cap(c_a), veh/h	724	875	740	695	0	0	0	0	463	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.6	14.2	15.9	14.2	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.0	0.8	0.1	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	0.2	3.2	0.2	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	26.2	14.2	16.7	14.2	0.0	0.0	0.0	0.0	42.2	0.0	0.0	0.0
LnGrp LOS	C	B	B	B					D			
Approach Vol, veh/h		673			16			319			306	
Approach Delay, s/veh		23.3			14.2			42.2			0.0	
Approach LOS		C			B			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		52.0		28.0		52.0		48.0
Change Period (Y+Rc), s		6.0		* 4		6.0		6.0
Max Green Setting (Gmax), s		46.0		* 24		46.0		42.0
Max Q Clear Time (g_c+I1), s		29.8		17.6		2.5		13.7
Green Ext Time (p_c), s		2.8		0.7		3.3		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	173	1329	0	0	663	136	0	0	0	238	0	172
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	211	1621	0	0	809	166	0	0	0	290	0	210
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	2269	0	0	2237	955	0	2	0	279	0	202
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.30	0.00	0.30
Sat Flow, veh/h	416	3742	0	0	3632	1539	0	1863	0	972	0	704
Grp Volume(v), veh/h	447	1385	0	0	809	166	0	0	0	500	0	0
Grp Sat Flow(s),veh/h/ln	920	1543	0	0	1770	1539	0	1863	0	1676	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Prop In Lane	0.47		0.00	0.00		1.00	0.00		0.00	0.58		0.42
Lane Grp Cap(c), veh/h	632	1950	0	0	2237	955	0	2	0	481	0	0
V/C Ratio(X)	0.71	0.71	0.00	0.00	0.36	0.17	0.00	0.00	0.00	1.04	0.00	0.00
Avail Cap(c_a), veh/h	632	1950	0	0	2237	955	0	193	0	481	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.00	0.00	0.90	0.90	0.00	0.00	0.00	0.96	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5	0.0	0.0
Incr Delay (d2), s/veh	3.8	1.3	0.0	0.0	0.4	0.4	0.0	0.0	0.0	50.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.0	18.2	0.0	0.0
LnGrp Delay(d),s/veh	3.8	1.3	0.0	0.0	0.4	0.4	0.0	0.0	0.0	80.9	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		1832			975			0			500	
Approach Delay, s/veh		1.9			0.4			0.0			80.9	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		71.0		0.0		71.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		53.0		8.0		53.0		24.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		27.0
Green Ext Time (p_c), s		29.9		0.0		29.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	1461	27	11	557	22	241	16	32	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.97		0.95	1.00		0.91	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	88	1623	30	12	619	24	268	18	36			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	136	2118	39	48	1533	59	679	46	91			
Arrive On Green	0.63	0.63	0.61	0.92	0.94	0.92	0.47	0.47	0.45			
Sat Flow, veh/h	201	4506	83	22	3262	125	1445	97	194			
Grp Volume(v), veh/h	577	558	606	337	0	318	322	0	0			
Grp Sat Flow(s),veh/h/ln	1572	1543	1675	1750	0	1659	1736	0	0			
Q Serve(g_s), s	19.2	26.1	26.2	0.0	0.0	1.9	12.1	0.0	0.0			
Cycle Q Clear(g_c), s	25.6	26.1	26.2	1.7	0.0	1.9	12.1	0.0	0.0			
Prop In Lane	0.15		0.05	0.04		0.08	0.83		0.11			
Lane Grp Cap(c), veh/h	780	725	787	842	0	780	816	0	0			
V/C Ratio(X)	0.74	0.77	0.77	0.40	0.00	0.41	0.39	0.00	0.00			
Avail Cap(c_a), veh/h	780	725	787	842	0	780	816	0	0			
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	14.4	14.8	14.9	1.7	0.0	1.7	17.3	0.0	0.0			
Incr Delay (d2), s/veh	6.2	7.7	7.2	1.4	0.0	1.6	1.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.5	12.5	13.5	1.1	0.0	1.1	6.1	0.0	0.0			
LnGrp Delay(d),s/veh	20.6	22.6	22.0	3.1	0.0	3.3	18.8	0.0	0.0			
LnGrp LOS	C	C	C	A		A	B					
Approach Vol, veh/h		1741			655			322				
Approach Delay, s/veh		21.7			3.2			18.8				
Approach LOS		C			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		50.0		50.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		45.0		44.0		45.0		
Max Q Clear Time (g_c+I1), s		28.2		14.1		3.9		
Green Ext Time (p_c), s		10.9		0.0		17.6		

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	560	29	905	79	495	497	0	0	0	6	215	94
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	622	0	1027	88	550	552				7	239	104
Adj No. of Lanes	1	0	2	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	392	0	2092	202	1176	707				479	503	405
Arrive On Green	0.14	0.00	0.67	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	0	3122	308	2352	1413				1774	1863	1558
Grp Volume(v), veh/h	622	0	1027	274	364	552				7	239	104
Grp Sat Flow(s),veh/h/ln	1774	0	1561	1117	1543	1413				1774	1863	1558
Q Serve(g_s), s	14.0	0.0	16.2	9.0	15.4	32.0				0.3	10.7	5.3
Cycle Q Clear(g_c), s	14.0	0.0	16.2	13.3	15.4	32.0				0.3	10.7	5.3
Prop In Lane	1.00		1.00	0.32		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	392	0	2092	606	771	707				479	503	405
V/C Ratio(X)	1.59	0.00	0.49	0.45	0.47	0.78				0.01	0.48	0.26
Avail Cap(c_a), veh/h	392	0	2092	606	771	707				479	503	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	8.1	15.2	16.4	20.5				26.8	30.6	29.3
Incr Delay (d2), s/veh	276.8	0.0	0.8	2.4	2.1	8.4				0.1	3.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	40.9	0.0	7.1	5.1	7.0	14.1				0.1	6.0	2.5
LnGrp Delay(d),s/veh	316.0	0.0	8.9	17.7	18.4	28.9				26.8	33.8	30.9
LnGrp LOS	F		A	B	B	C				C	C	C
Approach Vol, veh/h		1649			1190						350	
Approach Delay, s/veh		124.8			23.1						32.8	
Approach LOS		F			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	16.0	34.0				18.2		12.7
Green Ext Time (p_c), s	0.0	5.5				12.7		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	76.7
HCM 2010 LOS	E

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	141	131	12	28	282	0	0	360	73
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				157	146	13	31	313	0	0	400	81
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				789	829	705	351	848	0	0	848	720
Arrive On Green				0.44	0.44	0.44	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1774	1863	1583	910	1863	0	0	1863	1583
Grp Volume(v), veh/h				157	146	13	31	313	0	0	400	81
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	910	1863	0	0	1863	1583
Q Serve(g_s), s				5.4	4.7	0.5	2.4	11.0	0.0	0.0	14.9	2.9
Cycle Q Clear(g_c), s				5.4	4.7	0.5	17.4	11.0	0.0	0.0	14.9	2.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				789	829	705	351	848	0	0	848	720
V/C Ratio(X)				0.20	0.18	0.02	0.09	0.37	0.00	0.00	0.47	0.11
Avail Cap(c_a), veh/h				789	829	705	351	848	0	0	848	720
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				16.9	16.7	15.5	24.9	17.9	0.0	0.0	18.9	15.7
Incr Delay (d2), s/veh				0.6	0.5	0.0	0.5	1.2	0.0	0.0	1.9	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.7	2.5	0.2	0.7	5.9	0.0	0.0	8.1	1.3
LnGrp Delay(d),s/veh				17.5	17.2	15.6	25.4	19.1	0.0	0.0	20.8	16.0
LnGrp LOS				B	B	B	C	B			C	B
Approach Vol, veh/h					316			344			481	
Approach Delay, s/veh					17.3			19.7			20.0	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				19.4		7.4		16.9
Green Ext Time (p_c), s				5.3		0.9		5.4

Intersection Summary		
HCM 2010 Ctrl Delay		19.1
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	1273	16	37	733	13	236	0	313	82	0	156
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	51	1819	23	53	1047	19	337	0	447	117	0	223
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	2715	34	74	1823	33	333	0	530	141	0	530
Arrive On Green	0.57	0.57	0.57	1.00	1.00	1.00	0.34	0.00	0.34	0.34	0.00	0.34
Sat Flow, veh/h	88	4721	59	3	3171	58	1153	0	1583	939	0	1583
Grp Volume(v), veh/h	644	597	652	53	509	557	337	0	447	117	0	223
Grp Sat Flow(s),veh/h/ln	1641	1543	1685	3	1543	1685	1153	0	1583	939	0	1583
Q Serve(g_s), s	7.9	26.8	26.9	26.4	0.0	0.0	22.6	0.0	26.2	7.3	0.0	10.9
Cycle Q Clear(g_c), s	24.5	26.8	26.9	26.4	0.0	0.0	33.5	0.0	26.2	33.5	0.0	10.9
Prop In Lane	0.08		0.04	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	982	887	969	0	887	969	333	0	530	141	0	530
V/C Ratio(X)	0.66	0.67	0.67	0.00	0.57	0.57	1.01	0.00	0.84	0.83	0.00	0.42
Avail Cap(c_a), veh/h	982	887	969	0	887	969	333	0	530	141	0	530
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	14.7	14.7	0.0	0.0	0.0	41.1	0.0	30.8	47.8	0.0	25.7
Incr Delay (d2), s/veh	3.4	4.1	3.7	0.0	2.5	2.3	52.7	0.0	11.8	32.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	12.3	13.3	0.0	0.6	0.6	14.0	0.0	13.2	4.5	0.0	4.8
LnGrp Delay(d),s/veh	17.3	18.8	18.5	0.0	2.5	2.3	94.0	0.0	42.6	80.0	0.0	26.3
LnGrp LOS	B	B	B		A	A	F		D	F		C
Approach Vol, veh/h		1893			1119			784			340	
Approach Delay, s/veh		18.2			2.2			64.7			44.8	
Approach LOS		B			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		62.0		38.0		62.0		38.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		43.5		33.5		57.5		33.5
Max Q Clear Time (g_c+I1), s		28.9		35.5		28.4		35.5
Green Ext Time (p_c), s		13.5		0.0		25.3		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		24.9
HCM 2010 LOS		C

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	760	130	206	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	844	144	229	0	0

Major/Minor	Major2			Major1		
Conflicting Flow All	0	0	0	989	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	699	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	699	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	12.6
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	699	-	-	-	-	-	330
HCM Lane V/C Ratio	0.327	-	-	-	-	-	0.263
HCM Control Delay (s)	12.6	-	-	0	-	-	19.8
HCM Lane LOS	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.4	-	-	-	-	-	1

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	78
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	87

Major/Minor	Minor2		
Conflicting Flow All	917	1375	917
Stage 1	917	917	-
Stage 2	0	458	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	302	145	330
Stage 1	390	351	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	203	0	330
Mov Cap-2 Maneuver	203	0	-
Stage 1	390	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	19.8
HCM LOS	C

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	136	794	131	43	257	0	0	236	89
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.95	1.00		1.00	1.00		0.94
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				151	882	146	48	286	0	0	262	99
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				227	1396	659	126	725	0	0	620	234
Arrive On Green				0.45	0.45	0.44	0.49	0.49	0.00	0.00	0.49	0.48
Sat Flow, veh/h				504	3103	1499	174	1479	0	0	1266	478
Grp Volume(v), veh/h				551	482	146	334	0	0	0	0	361
Grp Sat Flow(s),veh/h/ln				1838	1770	1499	1653	0	0	0	0	1744
Q Serve(g_s), s				23.5	20.6	6.0	0.4	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				23.5	20.6	6.0	13.8	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.27		1.00	0.14		0.00	0.00		0.27
Lane Grp Cap(c), veh/h				827	796	659	851	0	0	0	0	855
V/C Ratio(X)				0.67	0.61	0.22	0.39	0.00	0.00	0.00	0.00	0.42
Avail Cap(c_a), veh/h				827	796	659	851	0	0	0	0	855
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				21.6	20.8	17.4	15.9	0.0	0.0	0.0	0.0	16.5
Incr Delay (d2), s/veh				4.2	3.4	0.8	1.4	0.0	0.0	0.0	0.0	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.9	10.8	2.6	6.0	0.0	0.0	0.0	0.0	6.8
LnGrp Delay(d),s/veh				25.8	24.2	18.1	17.2	0.0	0.0	0.0	0.0	18.0
LnGrp LOS				C	C	B	B					B
Approach Vol, veh/h					1179			334			361	
Approach Delay, s/veh					24.2			17.2			18.0	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				52.0		48.0		52.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				47.0		43.0		47.0
Max Q Clear Time (g_c+I1), s				15.8		25.5		15.4
Green Ext Time (p_c), s				3.2		0.0		3.2

Intersection Summary		
HCM 2010 Ctrl Delay		21.8
HCM 2010 LOS		C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	301	74	89	284
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			334	82	99	316
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1365	335	58	161
Arrive On Green			0.31	0.31	1.00	1.00
Sat Flow, veh/h			1436	353	14	166
Grp Volume(v), veh/h			0	416	415	0
Grp Sat Flow(s),veh/h/ln			0	1789	180	0
Q Serve(g_s), s			0.0	17.3	1.1	0.0
Cycle Q Clear(g_c), s			0.0	17.3	1.1	0.0
Prop In Lane				0.20	0.24	
Lane Grp Cap(c), veh/h			0	1700	0	0
V/C Ratio(X)			0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h			0	1700	0	0
HCM Platoon Ratio			0.33	0.33	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	7.7	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	8.7	0.0	0.0
LnGrp Delay(d),s/veh			0.0	8.0	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			416			415
Approach Delay, s/veh			8.0			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				19.3				3.1
Green Ext Time (p_c), s				4.2				4.2

Intersection Summary		
HCM 2010 Ctrl Delay		4.0
HCM 2010 LOS		A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	168	34	369	8	0	8	0	199	8	6	278	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	187	38	410	9	0	9	0	221	9	7	309	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	637	764	645	283	17	246	0	869	35	37	625	0
Arrive On Green	0.41	0.41	0.41	0.41	0.00	0.41	0.00	0.16	0.16	0.49	0.49	0.00
Sat Flow, veh/h	1400	1863	1574	559	42	601	0	1773	72	1	1275	0
Grp Volume(v), veh/h	187	38	410	18	0	0	0	0	230	316	0	0
Grp Sat Flow(s),veh/h/ln	1400	1863	1574	1202	0	0	0	0	1845	1276	0	0
Q Serve(g_s), s	9.2	1.2	20.8	0.0	0.0	0.0	0.0	0.0	10.9	10.6	0.0	0.0
Cycle Q Clear(g_c), s	9.8	1.2	20.8	0.6	0.0	0.0	0.0	0.0	10.9	10.6	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.04	0.02		0.00
Lane Grp Cap(c), veh/h	637	764	645	547	0	0	0	0	904	0	0	0
V/C Ratio(X)	0.29	0.05	0.64	0.03	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00
Avail Cap(c_a), veh/h	637	764	645	547	0	0	0	0	904	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	17.8	23.5	17.6	0.0	0.0	0.0	0.0	25.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.1	4.7	0.1	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.7	9.8	0.3	0.0	0.0	0.0	0.0	5.7	0.0	0.0	0.0
LnGrp Delay(d),s/veh	21.7	17.9	28.3	17.7	0.0	0.0	0.0	0.0	26.6	0.0	0.0	0.0
LnGrp LOS	C	B	C	B					C			
Approach Vol, veh/h		635			18			230			316	
Approach Delay, s/veh		25.7			17.7			26.6			0.0	
Approach LOS		C			B			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		46.0		54.0		46.0		54.0
Change Period (Y+Rc), s		6.0		* 6		6.0		6.0
Max Green Setting (Gmax), s		40.0		* 28		40.0		48.0
Max Q Clear Time (g_c+I1), s		22.8		12.9		2.6		12.6
Green Ext Time (p_c), s		2.8		2.0		3.2		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	700	0	0	913	50	0	0	0	495	0	105
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	59	778	0	0	1014	56	0	0	0	550	0	117
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	2365	0	0	2034	864	0	2	0	493	0	105
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.36	0.00	0.36
Sat Flow, veh/h	233	4268	0	0	3632	1534	0	1863	0	1429	0	304
Grp Volume(v), veh/h	256	581	0	0	1014	56	0	0	0	667	0	0
Grp Sat Flow(s),veh/h/ln	1263	1543	0	0	1770	1534	0	1863	0	1732	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Prop In Lane	0.23		0.00	0.00		1.00	0.00		0.00	0.82		0.18
Lane Grp Cap(c), veh/h	762	1773	0	0	2034	864	0	2	0	597	0	0
V/C Ratio(X)	0.34	0.33	0.00	0.00	0.50	0.06	0.00	0.00	0.00	1.12	0.00	0.00
Avail Cap(c_a), veh/h	762	1773	0	0	2034	864	0	193	0	597	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.00	0.00	0.55	0.55	0.00	0.00	0.00	0.91	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	71.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	26.2	0.0	0.0
LnGrp Delay(d),s/veh	1.0	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	99.7	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		837			1070			0			667	
Approach Delay, s/veh		0.6			0.5			0.0			99.7	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		66.0		0.0		66.0		34.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		48.0		8.0		48.0		29.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		32.0
Green Ext Time (p_c), s		14.3		0.0		14.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	793	372	37	932	22	27	6	32	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.95	0.99		0.92	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	36	881	413	41	1036	24	30	7	36			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	69	1427	657	76	1536	35	297	69	356			
Arrive On Green	0.98	0.98	0.96	0.48	0.49	0.48	0.45	0.45	0.43			
Sat Flow, veh/h	61	2912	1341	75	3134	72	660	154	792			
Grp Volume(v), veh/h	432	474	423	541	0	560	73	0	0			
Grp Sat Flow(s),veh/h/ln	1397	1543	1374	1606	0	1675	1605	0	0			
Q Serve(g_s), s	10.5	1.6	3.1	7.3	0.0	25.7	2.7	0.0	0.0			
Cycle Q Clear(g_c), s	36.1	1.6	3.1	23.2	0.0	25.7	2.7	0.0	0.0			
Prop In Lane	0.08		0.98	0.08		0.04	0.41		0.49			
Lane Grp Cap(c), veh/h	724	756	673	810	0	821	722	0	0			
V/C Ratio(X)	0.60	0.63	0.63	0.67	0.00	0.68	0.10	0.00	0.00			
Avail Cap(c_a), veh/h	724	756	673	810	0	821	722	0	0			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.91	0.45	0.00	0.45	1.00	0.00	0.00			
Uniform Delay (d), s/veh	2.1	0.5	1.1	18.5	0.0	19.6	16.1	0.0	0.0			
Incr Delay (d2), s/veh	3.3	3.6	4.0	2.0	0.0	2.1	0.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.5	1.0	1.4	11.8	0.0	12.3	1.2	0.0	0.0			
LnGrp Delay(d),s/veh	5.3	4.1	5.1	20.5	0.0	21.6	16.4	0.0	0.0			
LnGrp LOS	A	A	A	C		C	B					
Approach Vol, veh/h		1330			1101			73				
Approach Delay, s/veh		4.8			21.1			16.4				
Approach LOS		A			C			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		52.0		48.0		52.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		47.0		42.0		47.0		
Max Q Clear Time (g_c+I1), s		38.1		4.7		27.7		
Green Ext Time (p_c), s		6.9		0.0		12.5		

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	138	152	541	387	750	293	0	0	0	42	303	241
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	153	493	385	430	833	326				47	337	268
Adj No. of Lanes	1	1	1	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	396	1248	1046	385	1102	431				479	503	405
Arrive On Green	0.23	1.00	1.00	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	1863	1561	626	2204	862				1774	1863	1558
Grp Volume(v), veh/h	153	493	385	430	583	576				47	337	268
Grp Sat Flow(s),veh/h/ln	1774	1863	1561	626	1543	1523				1774	1863	1558
Q Serve(g_s), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Prop In Lane	1.00		1.00	1.00		0.57				1.00		1.00
Lane Grp Cap(c), veh/h	396	1248	1046	385	771	762				479	503	405
V/C Ratio(X)	0.39	0.40	0.37	1.12	0.76	0.76				0.10	0.67	0.66
Avail Cap(c_a), veh/h	396	1248	1046	385	771	762				479	503	405
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	0.0	29.7	20.1	20.1				27.4	32.5	33.1
Incr Delay (d2), s/veh	2.8	0.9	1.0	81.6	6.8	6.9				0.4	6.9	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.3	0.3	19.3	14.2	14.1				1.0	9.2	7.6
LnGrp Delay(d),s/veh	32.0	0.9	1.0	111.3	26.9	27.0				27.8	39.5	41.3
LnGrp LOS	C	A	A	F	C	C				C	D	D
Approach Vol, veh/h		1031			1589						652	
Approach Delay, s/veh		5.6			49.8						39.4	
Approach LOS		A			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	2.0	52.0				2.0		18.1
Green Ext Time (p_c), s	3.5	0.0				5.4		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	367	407	13	27	95	0	0	464	79
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				408	452	14	30	106	0	0	516	88
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				825	866	720	294	885	0	0	885	736
Arrive On Green				0.47	0.47	0.46	0.47	0.47	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1774	1863	1583	812	1863	0	0	1863	1583
Grp Volume(v), veh/h				408	452	14	30	106	0	0	516	88
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	812	1863	0	0	1863	1583
Q Serve(g_s), s				16.0	17.1	0.5	2.8	3.2	0.0	0.0	20.1	3.1
Cycle Q Clear(g_c), s				16.0	17.1	0.5	22.9	3.2	0.0	0.0	20.1	3.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				825	866	720	294	885	0	0	885	736
V/C Ratio(X)				0.49	0.52	0.02	0.10	0.12	0.00	0.00	0.58	0.12
Avail Cap(c_a), veh/h				825	866	720	294	885	0	0	885	736
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.6	18.9	15.0	27.4	14.6	0.0	0.0	19.1	15.2
Incr Delay (d2), s/veh				2.1	2.2	0.0	0.7	0.3	0.0	0.0	2.8	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.3	9.3	0.2	0.7	1.7	0.0	0.0	11.0	1.4
LnGrp Delay(d),s/veh				20.7	21.1	15.0	28.1	14.9	0.0	0.0	21.9	15.5
LnGrp LOS				C	C	B	C	B			C	B
Approach Vol, veh/h					874			136			604	
Approach Delay, s/veh					20.8			17.8			20.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				24.9		19.1		22.1
Green Ext Time (p_c), s				4.5		2.8		4.7

Intersection Summary		
HCM 2010 Ctrl Delay		20.6
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	205	586	204	308	858	56	16	0	22	15	0	20
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	315	902	314	474	1320	86	25	0	34	23	0	31
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	400	1915	667	84	2508	163	191	0	118	157	0	118
Arrive On Green	0.81	0.83	0.81	1.00	1.00	1.00	0.10	0.00	0.09	0.07	0.00	0.07
Sat Flow, veh/h	381	2297	800	2	3008	196	1373	0	1583	1369	0	1583
Grp Volume(v), veh/h	315	606	610	474	677	729	25	0	34	23	0	31
Grp Sat Flow(s),veh/h/ln	381	1543	1554	2	1543	1661	1373	0	1583	1369	0	1583
Q Serve(g_s), s	71.0	9.4	10.0	100.0	0.0	0.0	1.5	0.0	1.8	1.4	0.0	1.6
Cycle Q Clear(g_c), s	71.0	9.4	10.0	100.0	0.0	0.0	3.1	0.0	1.8	3.2	0.0	1.6
Prop In Lane	1.00		0.51	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	392	1286	1296	0	1286	1385	191	0	118	157	0	118
V/C Ratio(X)	0.80	0.47	0.47	0.00	0.53	0.53	0.13	0.00	0.29	0.15	0.00	0.26
Avail Cap(c_a), veh/h	392	1286	1296	0	1286	1385	386	0	344	352	0	344
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	2.0	2.2	0.0	0.0	0.0	37.8	0.0	37.8	39.8	0.0	38.2
Incr Delay (d2), s/veh	16.0	1.2	1.2	0.0	1.2	1.1	0.3	0.0	1.3	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	4.3	4.5	0.0	0.4	0.4	0.6	0.0	0.8	0.6	0.0	0.7
LnGrp Delay(d),s/veh	24.7	3.2	3.4	0.0	1.2	1.1	38.1	0.0	39.1	40.2	0.0	39.4
LnGrp LOS	C	A	A		A	A	D		D	D		D
Approach Vol, veh/h		1531			1880			59			54	
Approach Delay, s/veh		7.7			0.9			38.7			39.7	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		88.4		11.6		88.4		11.6
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		45.0		19.0		71.0		19.0
Max Q Clear Time (g_c+I1), s		73.0		5.1		102.0		5.2
Green Ext Time (p_c), s		0.0		0.4		0.0		0.4

Intersection Summary		
HCM 2010 Ctrl Delay		5.1
HCM 2010 LOS		A

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	354	130	208	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	393	144	231	0	0

Major/Minor	Major2			Major1		
Conflicting Flow All	0	0	0	538	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	1030	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	1030	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	9.5
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1030	-	-	-	-	-	597
HCM Lane V/C Ratio	0.224	-	-	-	-	-	0.097
HCM Control Delay (s)	9.5	-	-	0	-	-	11.7
HCM Lane LOS	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	-	-	0.3

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	52
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	58

Major/Minor	Minor2		
Conflicting Flow All	466	928	466
Stage 1	466	466	-
Stage 2	0	462	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	555	268	597
Stage 1	632	562	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	431	0	597
Mov Cap-2 Maneuver	431	0	-
Stage 1	632	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	11.7
HCM LOS	B

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	89	408	121	84	409	0	0	297	52
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.94	1.00		1.00	1.00		0.95
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				99	453	134	93	454	0	0	330	58
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				253	1224	596	152	700	0	0	810	142
Arrive On Green				0.41	0.41	0.40	0.53	0.53	0.00	0.00	0.53	0.52
Sat Flow, veh/h				617	2985	1490	208	1322	0	0	1529	269
Grp Volume(v), veh/h				294	258	134	547	0	0	0	0	388
Grp Sat Flow(s),veh/h/ln				1832	1770	1490	1530	0	0	0	0	1798
Q Serve(g_s), s				11.3	10.1	5.9	15.5	0.0	0.0	0.0	0.0	13.0
Cycle Q Clear(g_c), s				11.3	10.1	5.9	28.4	0.0	0.0	0.0	0.0	13.0
Prop In Lane				0.34		1.00	0.17		0.00	0.00		0.15
Lane Grp Cap(c), veh/h				751	726	596	853	0	0	0	0	953
V/C Ratio(X)				0.39	0.36	0.22	0.64	0.00	0.00	0.00	0.00	0.41
Avail Cap(c_a), veh/h				751	726	596	853	0	0	0	0	953
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				20.7	20.4	19.8	17.8	0.0	0.0	0.0	0.0	14.1
Incr Delay (d2), s/veh				1.5	1.4	0.9	3.7	0.0	0.0	0.0	0.0	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.0	5.1	2.6	12.1	0.0	0.0	0.0	0.0	6.7
LnGrp Delay(d),s/veh				22.3	21.7	20.7	21.5	0.0	0.0	0.0	0.0	15.4
LnGrp LOS				C	C	C	C					B
Approach Vol, veh/h					686			547			388	
Approach Delay, s/veh					21.8			21.5			15.4	
Approach LOS					C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				56.0		44.0		56.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				51.0		39.0		51.0
Max Q Clear Time (g_c+I1), s				30.4		13.3		15.0
Green Ext Time (p_c), s				4.4		0.0		4.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	494	220	111	276
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			549	244	123	307
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1151	512	62	132
Arrive On Green			1.00	1.00	1.00	1.00
Sat Flow, veh/h			1212	539	16	136
Grp Volume(v), veh/h			0	793	430	0
Grp Sat Flow(s),veh/h/ln			0	1750	153	0
Q Serve(g_s), s			0.0	0.0	1.5	0.0
Cycle Q Clear(g_c), s			0.0	0.0	1.5	0.0
Prop In Lane				0.31	0.29	
Lane Grp Cap(c), veh/h			0	1663	0	0
V/C Ratio(X)			0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h			0	1663	0	0
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh			0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh			0.0	1.0	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			793			430
Approach Delay, s/veh			1.0			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				2.0				3.5
Green Ext Time (p_c), s				8.6				8.7

Intersection Summary	
HCM 2010 Ctrl Delay	0.6
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	426	14	166	7	0	7	0	281	6	13	263	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.90	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	473	16	184	8	0	8	0	312	7	14	292	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	724	875	740	357	17	320	0	452	10	38	456	0
Arrive On Green	0.47	0.47	0.47	0.47	0.00	0.47	0.00	0.25	0.25	0.43	0.43	0.00
Sat Flow, veh/h	1402	1863	1575	645	36	682	0	1810	41	2	1059	0
Grp Volume(v), veh/h	473	16	184	16	0	0	0	0	319	306	0	0
Grp Sat Flow(s),veh/h/ln	1402	1863	1575	1363	0	0	0	0	1850	1061	0	0
Q Serve(g_s), s	27.3	0.5	7.0	0.0	0.0	0.0	0.0	0.0	15.6	11.7	0.0	0.0
Cycle Q Clear(g_c), s	27.8	0.5	7.0	0.5	0.0	0.0	0.0	0.0	15.6	11.7	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.02	0.05		0.00
Lane Grp Cap(c), veh/h	724	875	740	695	0	0	0	0	463	0	0	0
V/C Ratio(X)	0.65	0.02	0.25	0.02	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.00
Avail Cap(c_a), veh/h	724	875	740	695	0	0	0	0	463	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.6	14.2	15.9	14.2	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.0	0.8	0.1	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	0.2	3.2	0.2	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	26.2	14.2	16.7	14.2	0.0	0.0	0.0	0.0	42.2	0.0	0.0	0.0
LnGrp LOS	C	B	B	B					D			
Approach Vol, veh/h		673			16			319			306	
Approach Delay, s/veh		23.3			14.2			42.2			0.0	
Approach LOS		C			B			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		52.0		28.0		52.0		48.0
Change Period (Y+Rc), s		6.0		* 4		6.0		6.0
Max Green Setting (Gmax), s		46.0		* 24		46.0		42.0
Max Q Clear Time (g_c+I1), s		29.8		17.6		2.5		13.7
Green Ext Time (p_c), s		2.8		0.7		3.3		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	173	1329	0	0	663	136	0	0	0	238	0	172
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	211	1621	0	0	809	166	0	0	0	290	0	210
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	2269	0	0	2237	955	0	2	0	279	0	202
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.30	0.00	0.30
Sat Flow, veh/h	416	3742	0	0	3632	1539	0	1863	0	972	0	704
Grp Volume(v), veh/h	447	1385	0	0	809	166	0	0	0	500	0	0
Grp Sat Flow(s),veh/h/ln	920	1543	0	0	1770	1539	0	1863	0	1676	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Prop In Lane	0.47		0.00	0.00		1.00	0.00		0.00	0.58		0.42
Lane Grp Cap(c), veh/h	632	1950	0	0	2237	955	0	2	0	481	0	0
V/C Ratio(X)	0.71	0.71	0.00	0.00	0.36	0.17	0.00	0.00	0.00	1.04	0.00	0.00
Avail Cap(c_a), veh/h	632	1950	0	0	2237	955	0	193	0	481	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.00	0.00	0.90	0.90	0.00	0.00	0.00	0.96	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5	0.0	0.0
Incr Delay (d2), s/veh	3.9	1.3	0.0	0.0	0.4	0.4	0.0	0.0	0.0	50.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.0	18.2	0.0	0.0
LnGrp Delay(d),s/veh	3.9	1.3	0.0	0.0	0.4	0.4	0.0	0.0	0.0	80.9	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		1832			975			0			500	
Approach Delay, s/veh		1.9			0.4			0.0			80.9	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		71.0		0.0		71.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		53.0		8.0		53.0		24.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		27.0
Green Ext Time (p_c), s		29.9		0.0		29.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	1461	9	8	557	22	235	16	31	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.97		0.95	1.00		0.91	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	88	1623	10	9	619	24	261	18	34			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	137	2147	13	44	1553	60	681	47	89			
Arrive On Green	0.63	0.63	0.61	0.92	0.94	0.92	0.47	0.47	0.45			
Sat Flow, veh/h	204	4567	28	15	3304	127	1449	100	189			
Grp Volume(v), veh/h	567	551	603	339	0	313	313	0	0			
Grp Sat Flow(s),veh/h/ln	1568	1543	1688	1788	0	1658	1738	0	0			
Q Serve(g_s), s	18.5	25.5	25.5	0.0	0.0	1.9	11.7	0.0	0.0			
Cycle Q Clear(g_c), s	24.9	25.5	25.5	1.8	0.0	1.9	11.7	0.0	0.0			
Prop In Lane	0.16		0.02	0.03		0.08	0.83		0.11			
Lane Grp Cap(c), veh/h	779	725	794	859	0	779	817	0	0			
V/C Ratio(X)	0.73	0.76	0.76	0.39	0.00	0.40	0.38	0.00	0.00			
Avail Cap(c_a), veh/h	779	725	794	859	0	779	817	0	0			
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	14.2	14.7	14.7	1.7	0.0	1.7	17.2	0.0	0.0			
Incr Delay (d2), s/veh	5.9	7.3	6.7	1.4	0.0	1.5	1.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.0	12.1	13.1	1.1	0.0	1.0	5.9	0.0	0.0			
LnGrp Delay(d),s/veh	20.2	22.1	21.5	3.0	0.0	3.2	18.6	0.0	0.0			
LnGrp LOS	C	C	C	A		A	B					
Approach Vol, veh/h		1721			652			313				
Approach Delay, s/veh		21.2			3.1			18.6				
Approach LOS		C			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		50.0		50.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		45.0		44.0		45.0		
Max Q Clear Time (g_c+I1), s		27.5		13.7		3.9		
Green Ext Time (p_c), s		11.0		0.0		17.2		

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	560	29	905	79	495	497	0	0	0	6	215	94
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	622	0	1027	88	550	552				7	239	104
Adj No. of Lanes	1	0	2	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	392	0	2092	202	1176	707				479	503	405
Arrive On Green	0.14	0.00	0.67	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	0	3122	308	2352	1413				1774	1863	1558
Grp Volume(v), veh/h	622	0	1027	274	364	552				7	239	104
Grp Sat Flow(s),veh/h/ln	1774	0	1561	1117	1543	1413				1774	1863	1558
Q Serve(g_s), s	14.0	0.0	16.2	9.0	15.4	32.0				0.3	10.7	5.3
Cycle Q Clear(g_c), s	14.0	0.0	16.2	13.3	15.4	32.0				0.3	10.7	5.3
Prop In Lane	1.00		1.00	0.32		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	392	0	2092	606	771	707				479	503	405
V/C Ratio(X)	1.59	0.00	0.49	0.45	0.47	0.78				0.01	0.48	0.26
Avail Cap(c_a), veh/h	392	0	2092	606	771	707				479	503	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	8.1	15.2	16.4	20.5				26.8	30.6	29.3
Incr Delay (d2), s/veh	276.8	0.0	0.8	2.4	2.1	8.4				0.1	3.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	40.9	0.0	7.1	5.1	7.0	14.1				0.1	6.0	2.5
LnGrp Delay(d),s/veh	316.0	0.0	8.9	17.7	18.4	28.9				26.8	33.8	30.9
LnGrp LOS	F		A	B	B	C				C	C	C
Approach Vol, veh/h		1649			1190						350	
Approach Delay, s/veh		124.8			23.1						32.8	
Approach LOS		F			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	16.0	34.0				18.2		12.7
Green Ext Time (p_c), s	0.0	5.5				12.7		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	76.7
HCM 2010 LOS	E

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	141	131	12	28	282	0	0	360	73
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				157	146	13	31	313	0	0	400	81
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				789	829	705	351	848	0	0	848	720
Arrive On Green				0.44	0.44	0.44	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1774	1863	1583	910	1863	0	0	1863	1583
Grp Volume(v), veh/h				157	146	13	31	313	0	0	400	81
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	910	1863	0	0	1863	1583
Q Serve(g_s), s				5.4	4.7	0.5	2.4	11.0	0.0	0.0	14.9	2.9
Cycle Q Clear(g_c), s				5.4	4.7	0.5	17.4	11.0	0.0	0.0	14.9	2.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				789	829	705	351	848	0	0	848	720
V/C Ratio(X)				0.20	0.18	0.02	0.09	0.37	0.00	0.00	0.47	0.11
Avail Cap(c_a), veh/h				789	829	705	351	848	0	0	848	720
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				16.9	16.7	15.5	24.9	17.9	0.0	0.0	18.9	15.7
Incr Delay (d2), s/veh				0.6	0.5	0.0	0.5	1.2	0.0	0.0	1.9	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.7	2.5	0.2	0.7	5.9	0.0	0.0	8.1	1.3
LnGrp Delay(d),s/veh				17.5	17.2	15.6	25.4	19.1	0.0	0.0	20.8	16.0
LnGrp LOS				B	B	B	C	B			C	B
Approach Vol, veh/h					316			344			481	
Approach Delay, s/veh					17.3			19.7			20.0	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				19.4		7.4		16.9
Green Ext Time (p_c), s				5.3		0.9		5.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	1273	5	32	733	13	227	0	311	82	0	156
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	51	1819	7	46	1047	19	324	0	444	117	0	223
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	2741	10	74	1823	33	333	0	530	143	0	530
Arrive On Green	0.57	0.57	0.57	1.00	1.00	1.00	0.34	0.00	0.34	0.34	0.00	0.34
Sat Flow, veh/h	88	4767	18	3	3171	58	1153	0	1583	942	0	1583
Grp Volume(v), veh/h	636	592	649	46	509	557	324	0	444	117	0	223
Grp Sat Flow(s),veh/h/ln	1639	1543	1692	3	1543	1685	1153	0	1583	942	0	1583
Q Serve(g_s), s	7.4	26.4	26.4	23.4	0.0	0.0	22.6	0.0	25.9	7.6	0.0	10.9
Cycle Q Clear(g_c), s	24.0	26.4	26.4	23.4	0.0	0.0	33.5	0.0	25.9	33.5	0.0	10.9
Prop In Lane	0.08		0.01	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	981	887	973	0	887	969	333	0	530	143	0	530
V/C Ratio(X)	0.65	0.67	0.67	0.00	0.57	0.57	0.97	0.00	0.84	0.82	0.00	0.42
Avail Cap(c_a), veh/h	981	887	973	0	887	969	333	0	530	143	0	530
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	14.6	14.7	0.0	0.0	0.0	40.9	0.0	30.7	47.7	0.0	25.7
Incr Delay (d2), s/veh	3.3	4.0	3.6	0.0	2.5	2.3	42.2	0.0	11.3	29.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	12.1	13.2	0.0	0.6	0.6	12.8	0.0	13.0	4.4	0.0	4.8
LnGrp Delay(d),s/veh	17.1	18.6	18.3	0.0	2.5	2.3	83.2	0.0	42.0	76.9	0.0	26.3
LnGrp LOS	B	B	B		A	A	F		D	E		C
Approach Vol, veh/h		1877			1112			768			340	
Approach Delay, s/veh		18.0			2.3			59.4			43.7	
Approach LOS		B			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		62.0		38.0		62.0		38.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		43.5		33.5		57.5		33.5
Max Q Clear Time (g_c+I1), s		28.4		35.5		25.4		35.5
Green Ext Time (p_c), s		13.8		0.0		27.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	760	130	206	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	844	144	229	0	0

Major/Minor	Major2			Major1		
Conflicting Flow All	0	0	0	989	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	699	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	699	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	12.6
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	699	-	-	-	-	-	330
HCM Lane V/C Ratio	0.327	-	-	-	-	-	0.263
HCM Control Delay (s)	12.6	-	-	0	-	-	19.8
HCM Lane LOS	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.4	-	-	-	-	-	1

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	78
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	87

Major/Minor	Minor2		
Conflicting Flow All	917	1375	917
Stage 1	917	917	-
Stage 2	0	458	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	302	145	330
Stage 1	390	351	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	203	0	330
Mov Cap-2 Maneuver	203	0	-
Stage 1	390	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	19.8
HCM LOS	C

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	136	794	131	43	257	0	0	236	89
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.95	1.00		1.00	1.00		0.94
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				151	882	146	48	286	0	0	262	99
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				227	1396	659	126	725	0	0	620	234
Arrive On Green				0.45	0.45	0.44	0.49	0.49	0.00	0.00	0.49	0.48
Sat Flow, veh/h				504	3103	1499	174	1479	0	0	1266	478
Grp Volume(v), veh/h				551	482	146	334	0	0	0	0	361
Grp Sat Flow(s),veh/h/ln				1838	1770	1499	1653	0	0	0	0	1744
Q Serve(g_s), s				23.5	20.6	6.0	0.4	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				23.5	20.6	6.0	13.8	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.27		1.00	0.14		0.00	0.00		0.27
Lane Grp Cap(c), veh/h				827	796	659	851	0	0	0	0	855
V/C Ratio(X)				0.67	0.61	0.22	0.39	0.00	0.00	0.00	0.00	0.42
Avail Cap(c_a), veh/h				827	796	659	851	0	0	0	0	855
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				21.6	20.8	17.4	15.9	0.0	0.0	0.0	0.0	16.5
Incr Delay (d2), s/veh				4.2	3.4	0.8	1.4	0.0	0.0	0.0	0.0	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.9	10.8	2.6	6.0	0.0	0.0	0.0	0.0	6.8
LnGrp Delay(d),s/veh				25.8	24.2	18.1	17.2	0.0	0.0	0.0	0.0	18.0
LnGrp LOS				C	C	B	B					B
Approach Vol, veh/h					1179			334			361	
Approach Delay, s/veh					24.2			17.2			18.0	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				52.0		48.0		52.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				47.0		43.0		47.0
Max Q Clear Time (g_c+I1), s				15.8		25.5		15.4
Green Ext Time (p_c), s				3.2		0.0		3.2

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	301	74	89	284
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			334	82	99	316
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1365	335	58	161
Arrive On Green			0.31	0.31	1.00	1.00
Sat Flow, veh/h			1436	353	14	166
Grp Volume(v), veh/h			0	416	415	0
Grp Sat Flow(s),veh/h/ln			0	1789	180	0
Q Serve(g_s), s			0.0	17.3	1.1	0.0
Cycle Q Clear(g_c), s			0.0	17.3	1.1	0.0
Prop In Lane				0.20	0.24	
Lane Grp Cap(c), veh/h			0	1700	0	0
V/C Ratio(X)			0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h			0	1700	0	0
HCM Platoon Ratio			0.33	0.33	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	7.7	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	8.7	0.0	0.0
LnGrp Delay(d),s/veh			0.0	8.0	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			416			415
Approach Delay, s/veh			8.0			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				19.3				3.1
Green Ext Time (p_c), s				4.2				4.2

Intersection Summary	
HCM 2010 Ctrl Delay	4.0
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	168	34	369	8	0	8	0	199	8	6	278	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	187	38	410	9	0	9	0	221	9	7	309	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	637	764	645	283	17	246	0	869	35	37	625	0
Arrive On Green	0.41	0.41	0.41	0.41	0.00	0.41	0.00	0.16	0.16	0.49	0.49	0.00
Sat Flow, veh/h	1400	1863	1574	559	42	601	0	1773	72	1	1275	0
Grp Volume(v), veh/h	187	38	410	18	0	0	0	0	230	316	0	0
Grp Sat Flow(s),veh/h/ln	1400	1863	1574	1202	0	0	0	0	1845	1276	0	0
Q Serve(g_s), s	9.2	1.2	20.8	0.0	0.0	0.0	0.0	0.0	10.9	10.6	0.0	0.0
Cycle Q Clear(g_c), s	9.8	1.2	20.8	0.6	0.0	0.0	0.0	0.0	10.9	10.6	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.04	0.02		0.00
Lane Grp Cap(c), veh/h	637	764	645	547	0	0	0	0	904	0	0	0
V/C Ratio(X)	0.29	0.05	0.64	0.03	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00
Avail Cap(c_a), veh/h	637	764	645	547	0	0	0	0	904	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	17.8	23.5	17.6	0.0	0.0	0.0	0.0	25.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.1	4.7	0.1	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.7	9.8	0.3	0.0	0.0	0.0	0.0	5.7	0.0	0.0	0.0
LnGrp Delay(d),s/veh	21.7	17.9	28.3	17.7	0.0	0.0	0.0	0.0	26.6	0.0	0.0	0.0
LnGrp LOS	C	B	C	B					C			
Approach Vol, veh/h		635			18			230			316	
Approach Delay, s/veh		25.7			17.7			26.6			0.0	
Approach LOS		C			B			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		46.0		54.0		46.0		54.0
Change Period (Y+Rc), s		6.0		* 6		6.0		6.0
Max Green Setting (Gmax), s		40.0		* 28		40.0		48.0
Max Q Clear Time (g_c+I1), s		22.8		12.9		2.6		12.6
Green Ext Time (p_c), s		2.8		2.0		3.2		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	700	0	0	913	50	0	0	0	495	0	105
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	59	778	0	0	1014	56	0	0	0	550	0	117
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	2365	0	0	2034	864	0	2	0	493	0	105
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.36	0.00	0.36
Sat Flow, veh/h	233	4268	0	0	3632	1534	0	1863	0	1429	0	304
Grp Volume(v), veh/h	256	581	0	0	1014	56	0	0	0	667	0	0
Grp Sat Flow(s),veh/h/ln	1263	1543	0	0	1770	1534	0	1863	0	1732	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Prop In Lane	0.23		0.00	0.00		1.00	0.00		0.00	0.82		0.18
Lane Grp Cap(c), veh/h	762	1773	0	0	2034	864	0	2	0	597	0	0
V/C Ratio(X)	0.34	0.33	0.00	0.00	0.50	0.06	0.00	0.00	0.00	1.12	0.00	0.00
Avail Cap(c_a), veh/h	762	1773	0	0	2034	864	0	193	0	597	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.00	0.00	0.55	0.55	0.00	0.00	0.00	0.91	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	71.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	26.2	0.0	0.0
LnGrp Delay(d),s/veh	1.0	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	99.7	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		837			1070			0			667	
Approach Delay, s/veh		0.6			0.5			0.0			99.7	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		66.0		0.0		66.0		34.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		48.0		8.0		48.0		29.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		32.0
Green Ext Time (p_c), s		14.3		0.0		14.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	793	369	37	932	22	26	6	32	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.95	0.99		0.92	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	36	881	410	41	1036	24	29	7	36			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	69	1431	654	76	1536	35	291	70	361			
Arrive On Green	0.98	0.98	0.96	0.48	0.49	0.48	0.45	0.45	0.43			
Sat Flow, veh/h	61	2920	1334	75	3135	72	646	156	801			
Grp Volume(v), veh/h	431	473	423	541	0	560	72	0	0			
Grp Sat Flow(s),veh/h/ln	1397	1543	1376	1607	0	1675	1603	0	0			
Q Serve(g_s), s	10.4	1.6	3.0	7.3	0.0	25.7	2.6	0.0	0.0			
Cycle Q Clear(g_c), s	36.1	1.6	3.0	23.2	0.0	25.7	2.6	0.0	0.0			
Prop In Lane	0.08		0.97	0.08		0.04	0.40		0.50			
Lane Grp Cap(c), veh/h	724	756	674	810	0	821	721	0	0			
V/C Ratio(X)	0.60	0.63	0.63	0.67	0.00	0.68	0.10	0.00	0.00			
Avail Cap(c_a), veh/h	724	756	674	810	0	821	721	0	0			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.91	0.45	0.00	0.45	1.00	0.00	0.00			
Uniform Delay (d), s/veh	2.0	0.5	1.1	18.5	0.0	19.6	16.1	0.0	0.0			
Incr Delay (d2), s/veh	3.3	3.6	4.0	2.0	0.0	2.1	0.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.5	1.0	1.4	11.8	0.0	12.3	1.2	0.0	0.0			
LnGrp Delay(d),s/veh	5.3	4.1	5.1	20.5	0.0	21.6	16.4	0.0	0.0			
LnGrp LOS	A	A	A	C		C	B					
Approach Vol, veh/h		1327			1101			72				
Approach Delay, s/veh		4.8			21.1			16.4				
Approach LOS		A			C			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		52.0		48.0		52.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		47.0		42.0		47.0		
Max Q Clear Time (g_c+I1), s		38.1		4.6		27.7		
Green Ext Time (p_c), s		6.9		0.0		12.5		

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	138	152	541	387	750	293	0	0	0	42	303	241
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	153	493	385	430	833	326				47	337	268
Adj No. of Lanes	1	1	1	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	396	1248	1046	385	1102	431				479	503	405
Arrive On Green	0.23	1.00	1.00	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	1863	1561	626	2204	862				1774	1863	1558
Grp Volume(v), veh/h	153	493	385	430	583	576				47	337	268
Grp Sat Flow(s),veh/h/ln	1774	1863	1561	626	1543	1523				1774	1863	1558
Q Serve(g_s), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Prop In Lane	1.00		1.00	1.00		0.57				1.00		1.00
Lane Grp Cap(c), veh/h	396	1248	1046	385	771	762				479	503	405
V/C Ratio(X)	0.39	0.40	0.37	1.12	0.76	0.76				0.10	0.67	0.66
Avail Cap(c_a), veh/h	396	1248	1046	385	771	762				479	503	405
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	0.0	29.7	20.1	20.1				27.4	32.5	33.1
Incr Delay (d2), s/veh	2.8	0.9	1.0	81.6	6.8	6.9				0.4	6.9	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.3	0.3	19.3	14.2	14.1				1.0	9.2	7.6
LnGrp Delay(d),s/veh	32.0	0.9	1.0	111.3	26.9	27.0				27.8	39.5	41.3
LnGrp LOS	C	A	A	F	C	C				C	D	D
Approach Vol, veh/h		1031			1589						652	
Approach Delay, s/veh		5.6			49.8						39.4	
Approach LOS		A			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	2.0	52.0				2.0		18.1
Green Ext Time (p_c), s	3.5	0.0				5.4		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	367	407	13	27	95	0	0	464	79
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				408	452	14	30	106	0	0	516	88
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				825	866	720	294	885	0	0	885	736
Arrive On Green				0.47	0.47	0.46	0.47	0.47	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1774	1863	1583	812	1863	0	0	1863	1583
Grp Volume(v), veh/h				408	452	14	30	106	0	0	516	88
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	812	1863	0	0	1863	1583
Q Serve(g_s), s				16.0	17.1	0.5	2.8	3.2	0.0	0.0	20.1	3.1
Cycle Q Clear(g_c), s				16.0	17.1	0.5	22.9	3.2	0.0	0.0	20.1	3.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				825	866	720	294	885	0	0	885	736
V/C Ratio(X)				0.49	0.52	0.02	0.10	0.12	0.00	0.00	0.58	0.12
Avail Cap(c_a), veh/h				825	866	720	294	885	0	0	885	736
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.6	18.9	15.0	27.4	14.6	0.0	0.0	19.1	15.2
Incr Delay (d2), s/veh				2.1	2.2	0.0	0.7	0.3	0.0	0.0	2.8	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.3	9.3	0.2	0.7	1.7	0.0	0.0	11.0	1.4
LnGrp Delay(d),s/veh				20.7	21.1	15.0	28.1	14.9	0.0	0.0	21.9	15.5
LnGrp LOS				C	C	B	C	B			C	B
Approach Vol, veh/h					874			136			604	
Approach Delay, s/veh					20.8			17.8			20.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				24.9		19.1		22.1
Green Ext Time (p_c), s				4.5		2.8		4.7

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	205	586	200	307	858	56	15	0	22	15	0	20
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	315	902	308	472	1320	86	23	0	34	23	0	31
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	400	1926	658	84	2508	163	191	0	118	157	0	118
Arrive On Green	0.81	0.83	0.81	1.00	1.00	1.00	0.10	0.00	0.09	0.07	0.00	0.07
Sat Flow, veh/h	381	2310	789	2	3008	196	1373	0	1583	1369	0	1583
Grp Volume(v), veh/h	315	602	608	472	677	729	23	0	34	23	0	31
Grp Sat Flow(s),veh/h/ln	381	1543	1556	2	1543	1661	1373	0	1583	1369	0	1583
Q Serve(g_s), s	71.0	9.3	9.9	100.0	0.0	0.0	1.4	0.0	1.8	1.4	0.0	1.6
Cycle Q Clear(g_c), s	71.0	9.3	9.9	100.0	0.0	0.0	3.0	0.0	1.8	3.2	0.0	1.6
Prop In Lane	1.00		0.51	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	392	1286	1298	0	1287	1385	191	0	118	157	0	118
V/C Ratio(X)	0.80	0.47	0.47	0.00	0.53	0.53	0.12	0.00	0.29	0.15	0.00	0.26
Avail Cap(c_a), veh/h	392	1286	1298	0	1287	1385	386	0	344	352	0	344
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	2.0	2.2	0.0	0.0	0.0	37.8	0.0	37.8	39.8	0.0	38.2
Incr Delay (d2), s/veh	16.0	1.2	1.2	0.0	1.2	1.1	0.3	0.0	1.3	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	4.3	4.5	0.0	0.4	0.4	0.5	0.0	0.8	0.6	0.0	0.7
LnGrp Delay(d),s/veh	24.7	3.2	3.4	0.0	1.2	1.1	38.0	0.0	39.1	40.2	0.0	39.4
LnGrp LOS	C	A	A		A	A	D		D	D		D
Approach Vol, veh/h		1525			1878			57			54	
Approach Delay, s/veh		7.7			0.9			38.7			39.7	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		88.5		11.5		88.5		11.5
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		45.0		19.0		71.0		19.0
Max Q Clear Time (g_c+I1), s		73.0		5.0		102.0		5.2
Green Ext Time (p_c), s		0.0		0.4		0.0		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	5.1
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	354	130	208	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	393	144	231	0	0

Major/Minor	Major2			Major1		
Conflicting Flow All	0	0	0	538	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	1030	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	1030	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	9.5
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1030	-	-	-	-	-	597
HCM Lane V/C Ratio	0.224	-	-	-	-	-	0.097
HCM Control Delay (s)	9.5	-	-	0	-	-	11.7
HCM Lane LOS	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	-	-	0.3

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	52
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	58

Major/Minor	Minor2		
Conflicting Flow All	466	928	466
Stage 1	466	466	-
Stage 2	0	462	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	555	268	597
Stage 1	632	562	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	431	0	597
Mov Cap-2 Maneuver	431	0	-
Stage 1	632	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	11.7
HCM LOS	B

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	89	408	121	84	409	0	0	308	50
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.94	1.00		1.00	1.00		0.95
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				99	453	134	93	454	0	0	342	56
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				253	1224	596	151	694	0	0	820	134
Arrive On Green				0.41	0.41	0.40	0.53	0.53	0.00	0.00	0.53	0.52
Sat Flow, veh/h				617	2985	1490	206	1309	0	0	1548	253
Grp Volume(v), veh/h				294	258	134	547	0	0	0	0	398
Grp Sat Flow(s),veh/h/ln				1832	1770	1490	1515	0	0	0	0	1801
Q Serve(g_s), s				11.3	10.1	5.9	15.7	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				11.3	10.1	5.9	29.1	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.34		1.00	0.17		0.00	0.00		0.14
Lane Grp Cap(c), veh/h				751	726	596	845	0	0	0	0	955
V/C Ratio(X)				0.39	0.36	0.22	0.65	0.00	0.00	0.00	0.00	0.42
Avail Cap(c_a), veh/h				751	726	596	845	0	0	0	0	955
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				20.7	20.4	19.8	18.0	0.0	0.0	0.0	0.0	14.2
Incr Delay (d2), s/veh				1.5	1.4	0.9	3.8	0.0	0.0	0.0	0.0	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.0	5.1	2.6	12.3	0.0	0.0	0.0	0.0	7.0
LnGrp Delay(d),s/veh				22.3	21.7	20.7	21.8	0.0	0.0	0.0	0.0	15.6
LnGrp LOS				C	C	C	C					B
Approach Vol, veh/h					686			547			398	
Approach Delay, s/veh					21.8			21.8			15.6	
Approach LOS					C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				56.0		44.0		56.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				51.0		39.0		51.0
Max Q Clear Time (g_c+I1), s				31.1		13.3		15.4
Green Ext Time (p_c), s				4.4		0.0		4.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	494	222	109	289
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			549	247	121	321
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1146	516	61	139
Arrive On Green			1.00	1.00	1.00	1.00
Sat Flow, veh/h			1207	543	16	143
Grp Volume(v), veh/h			0	796	442	0
Grp Sat Flow(s),veh/h/ln			0	1749	159	0
Q Serve(g_s), s			0.0	0.0	1.6	0.0
Cycle Q Clear(g_c), s			0.0	0.0	1.6	0.0
Prop In Lane				0.31	0.27	
Lane Grp Cap(c), veh/h			0	1662	0	0
V/C Ratio(X)			0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h			0	1662	0	0
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh			0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh			0.0	1.0	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			796			442
Approach Delay, s/veh			1.0			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				2.0				3.6
Green Ext Time (p_c), s				8.8				8.8

Intersection Summary	
HCM 2010 Ctrl Delay	0.6
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	426	14	166	7	0	7	0	283	6	13	276	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.90	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	473	16	184	8	0	8	0	314	7	14	307	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	724	875	740	357	17	320	0	452	10	38	456	0
Arrive On Green	0.47	0.47	0.47	0.47	0.00	0.47	0.00	0.25	0.25	0.43	0.43	0.00
Sat Flow, veh/h	1402	1863	1575	645	36	682	0	1810	40	2	1059	0
Grp Volume(v), veh/h	473	16	184	16	0	0	0	0	321	321	0	0
Grp Sat Flow(s),veh/h/ln	1402	1863	1575	1363	0	0	0	0	1850	1061	0	0
Q Serve(g_s), s	27.3	0.5	7.0	0.0	0.0	0.0	0.0	0.0	15.7	12.3	0.0	0.0
Cycle Q Clear(g_c), s	27.8	0.5	7.0	0.5	0.0	0.0	0.0	0.0	15.7	12.3	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.02	0.04		0.00
Lane Grp Cap(c), veh/h	724	875	740	695	0	0	0	0	463	0	0	0
V/C Ratio(X)	0.65	0.02	0.25	0.02	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.00
Avail Cap(c_a), veh/h	724	875	740	695	0	0	0	0	463	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.6	14.2	15.9	14.2	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.0	0.8	0.1	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	0.2	3.2	0.2	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0
LnGrp Delay(d),s/veh	26.2	14.2	16.7	14.2	0.0	0.0	0.0	0.0	42.4	0.0	0.0	0.0
LnGrp LOS	C	B	B	B					D			
Approach Vol, veh/h		673			16			321			321	
Approach Delay, s/veh		23.3			14.2			42.4			0.0	
Approach LOS		C			B			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		52.0		28.0		52.0		48.0
Change Period (Y+Rc), s		6.0		* 4		6.0		6.0
Max Green Setting (Gmax), s		46.0		* 24		46.0		42.0
Max Q Clear Time (g_c+I1), s		29.8		17.7		2.5		14.3
Green Ext Time (p_c), s		2.8		0.7		3.3		1.3

Intersection Summary		
HCM 2010 Ctrl Delay		22.2
HCM 2010 LOS		C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	175	1331	0	0	663	136	0	0	0	238	0	185
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	208	1585	0	0	789	162	0	0	0	283	0	220
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	2276	0	0	2237	955	0	2	0	270	0	210
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.30	0.00	0.30
Sat Flow, veh/h	422	3752	0	0	3632	1539	0	1863	0	941	0	731
Grp Volume(v), veh/h	441	1352	0	0	789	162	0	0	0	503	0	0
Grp Sat Flow(s),veh/h/ln	937	1543	0	0	1770	1539	0	1863	0	1672	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Prop In Lane	0.47		0.00	0.00		1.00	0.00		0.00	0.56		0.44
Lane Grp Cap(c), veh/h	642	1950	0	0	2237	955	0	2	0	480	0	0
V/C Ratio(X)	0.69	0.69	0.00	0.00	0.35	0.17	0.00	0.00	0.00	1.05	0.00	0.00
Avail Cap(c_a), veh/h	642	1950	0	0	2237	955	0	193	0	480	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.00	0.00	0.90	0.90	0.00	0.00	0.00	0.95	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5	0.0	0.0
Incr Delay (d2), s/veh	3.4	1.2	0.0	0.0	0.4	0.3	0.0	0.0	0.0	52.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.0	18.5	0.0	0.0
LnGrp Delay(d),s/veh	3.4	1.2	0.0	0.0	0.4	0.3	0.0	0.0	0.0	83.4	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		1793			951			0			503	
Approach Delay, s/veh		1.7			0.4			0.0			83.4	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		71.0		0.0		71.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		53.0		8.0		53.0		24.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		27.0
Green Ext Time (p_c), s		28.8		0.0		28.8		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		14.0
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	1463	27	11	557	22	241	16	32	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.97		0.95	1.00		0.91	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	88	1626	30	12	619	24	268	18	36			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	136	2118	39	47	1533	59	679	46	91			
Arrive On Green	0.63	0.63	0.61	0.92	0.94	0.92	0.47	0.47	0.45			
Sat Flow, veh/h	201	4507	83	22	3261	125	1445	97	194			
Grp Volume(v), veh/h	578	559	607	337	0	318	322	0	0			
Grp Sat Flow(s),veh/h/ln	1572	1543	1675	1749	0	1659	1736	0	0			
Q Serve(g_s), s	19.3	26.2	26.3	0.0	0.0	1.9	12.1	0.0	0.0			
Cycle Q Clear(g_c), s	25.7	26.2	26.3	1.7	0.0	1.9	12.1	0.0	0.0			
Prop In Lane	0.15		0.05	0.04		0.08	0.83		0.11			
Lane Grp Cap(c), veh/h	781	725	787	842	0	780	816	0	0			
V/C Ratio(X)	0.74	0.77	0.77	0.40	0.00	0.41	0.39	0.00	0.00			
Avail Cap(c_a), veh/h	781	725	787	842	0	780	816	0	0			
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	14.4	14.8	14.9	1.7	0.0	1.7	17.3	0.0	0.0			
Incr Delay (d2), s/veh	6.2	7.8	7.2	1.4	0.0	1.6	1.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.5	12.5	13.5	1.1	0.0	1.1	6.1	0.0	0.0			
LnGrp Delay(d),s/veh	20.6	22.6	22.1	3.1	0.0	3.3	18.8	0.0	0.0			
LnGrp LOS	C	C	C	A		A	B					
Approach Vol, veh/h		1744			655			322				
Approach Delay, s/veh		21.8			3.2			18.8				
Approach LOS		C			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		50.0		50.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		45.0		44.0		45.0		
Max Q Clear Time (g_c+I1), s		28.3		14.1		3.9		
Green Ext Time (p_c), s		10.9		0.0		17.6		

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	560	30	905	79	495	497	0	0	0	6	215	94
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	622	0	1028	88	550	552				7	239	104
Adj No. of Lanes	1	0	2	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	392	0	2092	202	1175	707				479	503	405
Arrive On Green	0.14	0.00	0.67	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	0	3122	308	2351	1413				1774	1863	1558
Grp Volume(v), veh/h	622	0	1028	274	364	552				7	239	104
Grp Sat Flow(s),veh/h/ln	1774	0	1561	1116	1543	1413				1774	1863	1558
Q Serve(g_s), s	14.0	0.0	16.2	9.0	15.4	32.0				0.3	10.7	5.3
Cycle Q Clear(g_c), s	14.0	0.0	16.2	13.3	15.4	32.0				0.3	10.7	5.3
Prop In Lane	1.00		1.00	0.32		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	392	0	2092	606	771	707				479	503	405
V/C Ratio(X)	1.59	0.00	0.49	0.45	0.47	0.78				0.01	0.48	0.26
Avail Cap(c_a), veh/h	392	0	2092	606	771	707				479	503	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	8.1	15.2	16.4	20.5				26.8	30.6	29.3
Incr Delay (d2), s/veh	276.8	0.0	0.8	2.4	2.1	8.4				0.1	3.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	40.9	0.0	7.1	5.1	7.0	14.1				0.1	6.0	2.5
LnGrp Delay(d),s/veh	316.0	0.0	8.9	17.7	18.4	28.9				26.8	33.8	30.9
LnGrp LOS	F		A	B	B	C				C	C	C
Approach Vol, veh/h		1650			1190						350	
Approach Delay, s/veh		124.7			23.1						32.8	
Approach LOS		F			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	16.0	34.0				18.2		12.7
Green Ext Time (p_c), s	0.0	5.5				12.7		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	76.7
HCM 2010 LOS	E

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	141	131	12	28	282	0	0	360	73
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				157	146	13	31	313	0	0	400	81
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				789	829	705	351	848	0	0	848	720
Arrive On Green				0.44	0.44	0.44	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1774	1863	1583	910	1863	0	0	1863	1583
Grp Volume(v), veh/h				157	146	13	31	313	0	0	400	81
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	910	1863	0	0	1863	1583
Q Serve(g_s), s				5.4	4.7	0.5	2.4	11.0	0.0	0.0	14.9	2.9
Cycle Q Clear(g_c), s				5.4	4.7	0.5	17.4	11.0	0.0	0.0	14.9	2.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				789	829	705	351	848	0	0	848	720
V/C Ratio(X)				0.20	0.18	0.02	0.09	0.37	0.00	0.00	0.47	0.11
Avail Cap(c_a), veh/h				789	829	705	351	848	0	0	848	720
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				16.9	16.7	15.5	24.9	17.9	0.0	0.0	18.9	15.7
Incr Delay (d2), s/veh				0.6	0.5	0.0	0.5	1.2	0.0	0.0	1.9	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.7	2.5	0.2	0.7	5.9	0.0	0.0	8.1	1.3
LnGrp Delay(d),s/veh				17.5	17.2	15.6	25.4	19.1	0.0	0.0	20.8	16.0
LnGrp LOS				B	B	B	C	B			C	B
Approach Vol, veh/h					316			344			481	
Approach Delay, s/veh					17.3			19.7			20.0	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				19.4		7.4		16.9
Green Ext Time (p_c), s				5.3		0.9		5.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	1273	16	37	733	13	236	0	317	82	0	156
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	51	1819	23	53	1047	19	337	0	453	117	0	223
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	2715	34	74	1823	33	333	0	530	136	0	530
Arrive On Green	0.57	0.57	0.57	1.00	1.00	1.00	0.34	0.00	0.34	0.34	0.00	0.34
Sat Flow, veh/h	88	4721	59	3	3171	58	1153	0	1583	934	0	1583
Grp Volume(v), veh/h	644	597	652	53	509	557	337	0	453	117	0	223
Grp Sat Flow(s),veh/h/ln	1641	1543	1685	3	1543	1685	1153	0	1583	934	0	1583
Q Serve(g_s), s	7.9	26.8	26.9	26.4	0.0	0.0	22.6	0.0	26.7	6.8	0.0	10.9
Cycle Q Clear(g_c), s	24.5	26.8	26.9	26.4	0.0	0.0	33.5	0.0	26.7	33.5	0.0	10.9
Prop In Lane	0.08		0.04	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	982	887	969	0	887	969	333	0	530	136	0	530
V/C Ratio(X)	0.66	0.67	0.67	0.00	0.57	0.57	1.01	0.00	0.85	0.86	0.00	0.42
Avail Cap(c_a), veh/h	982	887	969	0	887	969	333	0	530	136	0	530
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	14.7	14.7	0.0	0.0	0.0	41.1	0.0	31.0	48.1	0.0	25.7
Incr Delay (d2), s/veh	3.4	4.1	3.7	0.0	2.5	2.3	52.7	0.0	12.8	39.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	12.3	13.3	0.0	0.6	0.6	14.0	0.0	13.5	4.7	0.0	4.8
LnGrp Delay(d),s/veh	17.3	18.8	18.5	0.0	2.5	2.3	94.0	0.0	43.8	87.4	0.0	26.3
LnGrp LOS	B	B	B		A	A	F		D	F		C
Approach Vol, veh/h		1893			1119			790			340	
Approach Delay, s/veh		18.2			2.3			65.2			47.3	
Approach LOS		B			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		62.0		38.0		62.0		38.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		43.5		33.5		57.5		33.5
Max Q Clear Time (g_c+I1), s		28.9		35.5		28.4		35.5
Green Ext Time (p_c), s		13.5		0.0		25.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	760	130	206	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	844	144	229	0	0

Major/Minor	Major2			Major1		
Conflicting Flow All	0	0	0	989	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	699	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	699	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	12.6
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	699	-	-	-	-	-	330
HCM Lane V/C Ratio	0.327	-	-	-	-	-	0.263
HCM Control Delay (s)	12.6	-	-	0	-	-	19.8
HCM Lane LOS	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.4	-	-	-	-	-	1

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	78
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	87

Major/Minor	Minor2		
Conflicting Flow All	917	1375	917
Stage 1	917	917	-
Stage 2	0	458	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	302	145	330
Stage 1	390	351	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	203	0	330
Mov Cap-2 Maneuver	203	0	-
Stage 1	390	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	19.8
HCM LOS	C

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	136	794	129	43	268	0	0	236	89
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.95	1.00		1.00	1.00		0.94
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				151	882	143	48	298	0	0	262	99
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				227	1396	659	124	738	0	0	620	234
Arrive On Green				0.45	0.45	0.44	0.49	0.49	0.00	0.00	0.49	0.48
Sat Flow, veh/h				504	3103	1499	168	1506	0	0	1266	478
Grp Volume(v), veh/h				551	482	143	346	0	0	0	0	361
Grp Sat Flow(s),veh/h/ln				1838	1770	1499	1674	0	0	0	0	1744
Q Serve(g_s), s				23.5	20.6	5.9	0.3	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				23.5	20.6	5.9	13.7	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.27		1.00	0.14		0.00	0.00		0.27
Lane Grp Cap(c), veh/h				827	796	659	861	0	0	0	0	855
V/C Ratio(X)				0.67	0.61	0.22	0.40	0.00	0.00	0.00	0.00	0.42
Avail Cap(c_a), veh/h				827	796	659	861	0	0	0	0	855
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				21.6	20.8	17.3	16.0	0.0	0.0	0.0	0.0	16.5
Incr Delay (d2), s/veh				4.2	3.4	0.8	1.4	0.0	0.0	0.0	0.0	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.9	10.8	2.6	6.3	0.0	0.0	0.0	0.0	6.8
LnGrp Delay(d),s/veh				25.8	24.2	18.1	17.4	0.0	0.0	0.0	0.0	18.0
LnGrp LOS				C	C	B	B					B
Approach Vol, veh/h					1176			346			361	
Approach Delay, s/veh					24.2			17.4			18.0	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				52.0		48.0		52.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				47.0		43.0		47.0
Max Q Clear Time (g_c+I1), s				15.7		25.5		15.4
Green Ext Time (p_c), s				3.3		0.0		3.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	312	74	89	284
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			347	82	99	316
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1376	325	58	161
Arrive On Green			0.31	0.31	1.00	1.00
Sat Flow, veh/h			1449	342	14	166
Grp Volume(v), veh/h			0	429	415	0
Grp Sat Flow(s),veh/h/ln			0	1791	180	0
Q Serve(g_s), s			0.0	17.9	1.1	0.0
Cycle Q Clear(g_c), s			0.0	17.9	1.1	0.0
Prop In Lane				0.19	0.24	
Lane Grp Cap(c), veh/h			0	1702	0	0
V/C Ratio(X)			0.00	0.25	0.00	0.00
Avail Cap(c_a), veh/h			0	1702	0	0
HCM Platoon Ratio			0.33	0.33	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	7.8	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	9.0	0.0	0.0
LnGrp Delay(d),s/veh			0.0	8.2	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			429			415
Approach Delay, s/veh			8.2			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				19.9				3.1
Green Ext Time (p_c), s				4.3				4.3

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	166	34	371	8	0	8	0	212	8	6	278	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	184	38	412	9	0	9	0	236	9	7	309	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	637	764	645	283	17	246	0	871	33	37	625	0
Arrive On Green	0.41	0.41	0.41	0.41	0.00	0.41	0.00	0.16	0.16	0.49	0.49	0.00
Sat Flow, veh/h	1400	1863	1574	559	42	600	0	1779	68	1	1275	0
Grp Volume(v), veh/h	184	38	412	18	0	0	0	0	245	316	0	0
Grp Sat Flow(s),veh/h/ln	1400	1863	1574	1201	0	0	0	0	1846	1276	0	0
Q Serve(g_s), s	9.0	1.2	20.9	0.0	0.0	0.0	0.0	0.0	11.6	10.6	0.0	0.0
Cycle Q Clear(g_c), s	9.6	1.2	20.9	0.6	0.0	0.0	0.0	0.0	11.6	10.6	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.04	0.02		0.00
Lane Grp Cap(c), veh/h	637	764	645	546	0	0	0	0	905	0	0	0
V/C Ratio(X)	0.29	0.05	0.64	0.03	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00
Avail Cap(c_a), veh/h	637	764	645	546	0	0	0	0	905	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	17.8	23.6	17.6	0.0	0.0	0.0	0.0	26.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.1	4.8	0.1	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.7	9.9	0.3	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0
LnGrp Delay(d),s/veh	21.6	17.9	28.4	17.7	0.0	0.0	0.0	0.0	27.0	0.0	0.0	0.0
LnGrp LOS	C	B	C	B					C			
Approach Vol, veh/h		634			18			245			316	
Approach Delay, s/veh		25.8			17.7			27.0			0.0	
Approach LOS		C			B			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		46.0		54.0		46.0		54.0
Change Period (Y+Rc), s		6.0		* 6		6.0		6.0
Max Green Setting (Gmax), s		40.0		* 28		40.0		48.0
Max Q Clear Time (g_c+I1), s		22.9		13.6		2.6		12.6
Green Ext Time (p_c), s		2.8		2.0		3.2		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	700	0	0	915	50	0	0	0	495	0	107
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	73	778	0	0	1017	56	0	0	0	550	0	119
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	2256	0	0	2034	864	0	2	0	491	0	106
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.36	0.00	0.36
Sat Flow, veh/h	285	4079	0	0	3632	1534	0	1863	0	1424	0	308
Grp Volume(v), veh/h	243	608	0	0	1017	56	0	0	0	669	0	0
Grp Sat Flow(s),veh/h/ln	1126	1543	0	0	1770	1534	0	1863	0	1732	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Prop In Lane	0.30		0.00	0.00		1.00	0.00		0.00	0.82		0.18
Lane Grp Cap(c), veh/h	688	1773	0	0	2034	864	0	2	0	597	0	0
V/C Ratio(X)	0.35	0.34	0.00	0.00	0.50	0.06	0.00	0.00	0.00	1.12	0.00	0.00
Avail Cap(c_a), veh/h	688	1773	0	0	2034	864	0	193	0	597	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.00	0.00	0.54	0.54	0.00	0.00	0.00	0.91	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	73.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	26.4	0.0	0.0
LnGrp Delay(d),s/veh	1.2	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	101.1	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		851			1073			0			669	
Approach Delay, s/veh		0.7			0.5			0.0			101.1	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		66.0		0.0		66.0		34.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		48.0		8.0		48.0		29.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		32.0
Green Ext Time (p_c), s		14.8		0.0		14.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	793	372	37	934	22	27	6	32	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.95	0.99		0.92	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	36	881	413	41	1038	24	30	7	36			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	69	1426	657	75	1536	35	297	69	356			
Arrive On Green	0.98	0.98	0.96	0.48	0.49	0.48	0.45	0.45	0.43			
Sat Flow, veh/h	61	2911	1340	75	3135	72	660	154	792			
Grp Volume(v), veh/h	432	475	424	542	0	561	73	0	0			
Grp Sat Flow(s),veh/h/ln	1395	1543	1375	1607	0	1675	1605	0	0			
Q Serve(g_s), s	10.6	1.6	3.1	7.4	0.0	25.7	2.7	0.0	0.0			
Cycle Q Clear(g_c), s	36.3	1.6	3.1	23.3	0.0	25.7	2.7	0.0	0.0			
Prop In Lane	0.08		0.97	0.08		0.04	0.41		0.49			
Lane Grp Cap(c), veh/h	722	756	674	810	0	821	722	0	0			
V/C Ratio(X)	0.60	0.63	0.63	0.67	0.00	0.68	0.10	0.00	0.00			
Avail Cap(c_a), veh/h	722	756	674	810	0	821	722	0	0			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.89	0.89	0.89	0.45	0.00	0.45	1.00	0.00	0.00			
Uniform Delay (d), s/veh	2.1	0.5	1.1	18.6	0.0	19.6	16.1	0.0	0.0			
Incr Delay (d2), s/veh	3.2	3.5	4.0	2.0	0.0	2.1	0.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.7	1.0	1.4	11.8	0.0	12.3	1.2	0.0	0.0			
LnGrp Delay(d),s/veh	5.3	4.0	5.0	20.5	0.0	21.7	16.4	0.0	0.0			
LnGrp LOS	A	A	A	C		C	B					
Approach Vol, veh/h		1330			1103			73				
Approach Delay, s/veh		4.8			21.1			16.4				
Approach LOS		A			C			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		52.0		48.0		52.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		47.0		42.0		47.0		
Max Q Clear Time (g_c+I1), s		38.3		4.7		27.7		
Green Ext Time (p_c), s		6.8		0.0		12.5		

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	138	152	541	387	751	293	0	0	0	42	303	241
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	153	493	385	430	834	326				47	337	268
Adj No. of Lanes	1	1	1	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	395	1248	1046	385	1102	431				479	503	405
Arrive On Green	0.23	1.00	1.00	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	1863	1561	626	2205	861				1774	1863	1558
Grp Volume(v), veh/h	153	493	385	430	583	577				47	337	268
Grp Sat Flow(s),veh/h/ln	1774	1863	1561	626	1543	1523				1774	1863	1558
Q Serve(g_s), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Prop In Lane	1.00		1.00	1.00		0.57				1.00		1.00
Lane Grp Cap(c), veh/h	395	1248	1046	385	771	762				479	503	405
V/C Ratio(X)	0.39	0.40	0.37	1.12	0.76	0.76				0.10	0.67	0.66
Avail Cap(c_a), veh/h	395	1248	1046	385	771	762				479	503	405
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	0.0	29.7	20.1	20.1				27.4	32.5	33.1
Incr Delay (d2), s/veh	2.8	0.9	1.0	81.6	6.8	6.9				0.4	6.9	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.3	0.3	19.3	14.3	14.1				1.0	9.2	7.6
LnGrp Delay(d),s/veh	32.0	0.9	1.0	111.3	26.9	27.0				27.8	39.5	41.3
LnGrp LOS	C	A	A	F	C	C				C	D	D
Approach Vol, veh/h		1031			1590						652	
Approach Delay, s/veh		5.6			49.8						39.4	
Approach LOS		A			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	2.0	52.0				2.0		18.1
Green Ext Time (p_c), s	3.5	0.0				5.4		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	367	407	13	25	95	0	0	464	79
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				408	452	14	28	106	0	0	516	88
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				825	866	720	294	885	0	0	885	736
Arrive On Green				0.47	0.47	0.46	0.47	0.47	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1774	1863	1583	812	1863	0	0	1863	1583
Grp Volume(v), veh/h				408	452	14	28	106	0	0	516	88
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	812	1863	0	0	1863	1583
Q Serve(g_s), s				16.0	17.1	0.5	2.6	3.2	0.0	0.0	20.1	3.1
Cycle Q Clear(g_c), s				16.0	17.1	0.5	22.7	3.2	0.0	0.0	20.1	3.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				825	866	720	294	885	0	0	885	736
V/C Ratio(X)				0.49	0.52	0.02	0.10	0.12	0.00	0.00	0.58	0.12
Avail Cap(c_a), veh/h				825	866	720	294	885	0	0	885	736
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.6	18.9	15.0	27.3	14.6	0.0	0.0	19.1	15.2
Incr Delay (d2), s/veh				2.1	2.2	0.0	0.6	0.3	0.0	0.0	2.8	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.3	9.3	0.2	0.6	1.7	0.0	0.0	11.0	1.4
LnGrp Delay(d),s/veh				20.7	21.1	15.0	27.9	14.9	0.0	0.0	21.9	15.5
LnGrp LOS				C	C	B	C	B			C	B
Approach Vol, veh/h					874			134			604	
Approach Delay, s/veh					20.8			17.6			20.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				24.7		19.1		22.1
Green Ext Time (p_c), s				4.5		2.8		4.6

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	205	586	204	312	858	56	16	0	22	15	0	20
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	315	902	314	480	1320	86	25	0	34	23	0	31
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	400	1915	667	84	2508	163	191	0	118	157	0	118
Arrive On Green	0.81	0.83	0.81	1.00	1.00	1.00	0.10	0.00	0.09	0.07	0.00	0.07
Sat Flow, veh/h	381	2297	800	2	3008	196	1373	0	1583	1369	0	1583
Grp Volume(v), veh/h	315	606	610	480	676	730	25	0	34	23	0	31
Grp Sat Flow(s),veh/h/ln	381	1543	1554	2	1543	1661	1373	0	1583	1369	0	1583
Q Serve(g_s), s	71.0	9.4	10.0	100.0	0.0	0.0	1.5	0.0	1.8	1.4	0.0	1.6
Cycle Q Clear(g_c), s	71.0	9.4	10.0	100.0	0.0	0.0	3.1	0.0	1.8	3.2	0.0	1.6
Prop In Lane	1.00		0.51	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	392	1286	1296	0	1286	1385	191	0	118	157	0	118
V/C Ratio(X)	0.80	0.47	0.47	0.00	0.53	0.53	0.13	0.00	0.29	0.15	0.00	0.26
Avail Cap(c_a), veh/h	392	1286	1296	0	1286	1385	386	0	344	352	0	344
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.79	0.79	0.79	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	2.0	2.2	0.0	0.0	0.0	37.8	0.0	37.8	39.8	0.0	38.2
Incr Delay (d2), s/veh	16.0	1.2	1.2	0.0	1.2	1.1	0.3	0.0	1.3	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	4.3	4.5	0.0	0.4	0.4	0.6	0.0	0.8	0.6	0.0	0.7
LnGrp Delay(d),s/veh	24.7	3.2	3.4	0.0	1.2	1.1	38.1	0.0	39.1	40.2	0.0	39.4
LnGrp LOS	C	A	A		A	A	D		D	D		D
Approach Vol, veh/h		1531			1886			59			54	
Approach Delay, s/veh		7.7			0.9			38.7			39.7	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		88.4		11.6		88.4		11.6
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		45.0		19.0		71.0		19.0
Max Q Clear Time (g_c+I1), s		73.0		5.1		102.0		5.2
Green Ext Time (p_c), s		0.0		0.4		0.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	5.1
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	354	130	208	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	393	144	231	0	0

Major/Minor	Major2			Major1		
Conflicting Flow All	0	0	0	538	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	1030	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	1030	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	9.5
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1030	-	-	-	-	-	597
HCM Lane V/C Ratio	0.224	-	-	-	-	-	0.097
HCM Control Delay (s)	9.5	-	-	0	-	-	11.7
HCM Lane LOS	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	-	-	0.3

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	52
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	58

Major/Minor	Minor2		
Conflicting Flow All	466	928	466
Stage 1	466	466	-
Stage 2	0	462	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	555	268	597
Stage 1	632	562	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	431	0	597
Mov Cap-2 Maneuver	431	0	-
Stage 1	632	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	11.7
HCM LOS	B

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	89	408	121	84	409	0	0	308	50
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.94	1.00		1.00	1.00		0.95
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				99	453	134	93	454	0	0	342	56
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				253	1224	596	151	694	0	0	820	134
Arrive On Green				0.41	0.41	0.40	0.53	0.53	0.00	0.00	0.53	0.52
Sat Flow, veh/h				617	2985	1490	206	1309	0	0	1548	253
Grp Volume(v), veh/h				294	258	134	547	0	0	0	0	398
Grp Sat Flow(s),veh/h/ln				1832	1770	1490	1515	0	0	0	0	1801
Q Serve(g_s), s				11.3	10.1	5.9	15.7	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				11.3	10.1	5.9	29.1	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.34		1.00	0.17		0.00	0.00		0.14
Lane Grp Cap(c), veh/h				751	726	596	845	0	0	0	0	955
V/C Ratio(X)				0.39	0.36	0.22	0.65	0.00	0.00	0.00	0.00	0.42
Avail Cap(c_a), veh/h				751	726	596	845	0	0	0	0	955
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				20.7	20.4	19.8	18.0	0.0	0.0	0.0	0.0	14.2
Incr Delay (d2), s/veh				1.5	1.4	0.9	3.8	0.0	0.0	0.0	0.0	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.0	5.1	2.6	12.3	0.0	0.0	0.0	0.0	7.0
LnGrp Delay(d),s/veh				22.3	21.7	20.7	21.8	0.0	0.0	0.0	0.0	15.6
LnGrp LOS				C	C	C	C					B
Approach Vol, veh/h					686			547			398	
Approach Delay, s/veh					21.8			21.8			15.6	
Approach LOS					C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				56.0		44.0		56.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				51.0		39.0		51.0
Max Q Clear Time (g_c+I1), s				31.1		13.3		15.4
Green Ext Time (p_c), s				4.4		0.0		4.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	494	222	109	289
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			549	247	121	321
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1146	516	61	139
Arrive On Green			1.00	1.00	1.00	1.00
Sat Flow, veh/h			1207	543	16	143
Grp Volume(v), veh/h			0	796	442	0
Grp Sat Flow(s),veh/h/ln			0	1749	159	0
Q Serve(g_s), s			0.0	0.0	1.6	0.0
Cycle Q Clear(g_c), s			0.0	0.0	1.6	0.0
Prop In Lane				0.31	0.27	
Lane Grp Cap(c), veh/h			0	1662	0	0
V/C Ratio(X)			0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h			0	1662	0	0
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh			0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh			0.0	1.0	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			796			442
Approach Delay, s/veh			1.0			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				2.0				3.6
Green Ext Time (p_c), s				8.8				8.8

Intersection Summary	
HCM 2010 Ctrl Delay	0.6
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	426	14	166	7	0	7	0	283	6	19	269	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.90	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	473	16	184	8	0	8	0	314	7	21	299	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	724	875	740	357	17	320	0	452	10	40	394	0
Arrive On Green	0.47	0.47	0.47	0.47	0.00	0.47	0.00	0.25	0.25	0.43	0.43	0.00
Sat Flow, veh/h	1402	1863	1575	645	36	682	0	1810	40	3	916	0
Grp Volume(v), veh/h	473	16	184	16	0	0	0	0	321	320	0	0
Grp Sat Flow(s),veh/h/ln	1402	1863	1575	1363	0	0	0	0	1850	919	0	0
Q Serve(g_s), s	27.3	0.5	7.0	0.0	0.0	0.0	0.0	0.0	15.7	12.5	0.0	0.0
Cycle Q Clear(g_c), s	27.8	0.5	7.0	0.5	0.0	0.0	0.0	0.0	15.7	12.5	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.02	0.07		0.00
Lane Grp Cap(c), veh/h	724	875	740	695	0	0	0	0	463	0	0	0
V/C Ratio(X)	0.65	0.02	0.25	0.02	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.00
Avail Cap(c_a), veh/h	724	875	740	695	0	0	0	0	463	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.6	14.2	15.9	14.2	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.0	0.8	0.1	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	0.2	3.2	0.2	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0
LnGrp Delay(d),s/veh	26.2	14.2	16.7	14.2	0.0	0.0	0.0	0.0	42.4	0.0	0.0	0.0
LnGrp LOS	C	B	B	B					D			
Approach Vol, veh/h		673			16			321			320	
Approach Delay, s/veh		23.3			14.2			42.4			0.0	
Approach LOS		C			B			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		52.0		28.0		52.0		48.0
Change Period (Y+Rc), s		6.0		* 4		6.0		6.0
Max Green Setting (Gmax), s		46.0		* 24		46.0		42.0
Max Q Clear Time (g_c+I1), s		29.8		17.7		2.5		14.5
Green Ext Time (p_c), s		2.8		0.7		3.3		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	173	1329	0	0	663	136	0	0	0	244	0	172
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	211	1621	0	0	809	166	0	0	0	298	0	210
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	2269	0	0	2237	955	0	2	0	283	0	199
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.30	0.00	0.30
Sat Flow, veh/h	416	3742	0	0	3632	1539	0	1863	0	984	0	693
Grp Volume(v), veh/h	447	1385	0	0	809	166	0	0	0	508	0	0
Grp Sat Flow(s),veh/h/ln	920	1543	0	0	1770	1539	0	1863	0	1677	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Prop In Lane	0.47		0.00	0.00		1.00	0.00		0.00	0.59		0.41
Lane Grp Cap(c), veh/h	632	1950	0	0	2237	955	0	2	0	482	0	0
V/C Ratio(X)	0.71	0.71	0.00	0.00	0.36	0.17	0.00	0.00	0.00	1.05	0.00	0.00
Avail Cap(c_a), veh/h	632	1950	0	0	2237	955	0	193	0	482	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.00	0.00	0.90	0.90	0.00	0.00	0.00	0.95	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5	0.0	0.0
Incr Delay (d2), s/veh	3.8	1.3	0.0	0.0	0.4	0.4	0.0	0.0	0.0	55.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.0	18.9	0.0	0.0
LnGrp Delay(d),s/veh	3.8	1.3	0.0	0.0	0.4	0.4	0.0	0.0	0.0	85.5	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		1832			975			0			508	
Approach Delay, s/veh		1.9			0.4			0.0			85.5	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		71.0		0.0		71.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		53.0		8.0		53.0		24.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		27.0
Green Ext Time (p_c), s		29.9		0.0		29.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	1467	27	11	557	22	241	16	32	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.97		0.95	1.00		0.91	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	88	1630	30	12	619	24	268	18	36			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	136	2119	39	47	1533	59	679	46	91			
Arrive On Green	0.63	0.63	0.61	0.92	0.94	0.92	0.47	0.47	0.45			
Sat Flow, veh/h	200	4508	83	22	3261	125	1445	97	194			
Grp Volume(v), veh/h	579	560	608	337	0	318	322	0	0			
Grp Sat Flow(s),veh/h/ln	1573	1543	1675	1749	0	1659	1736	0	0			
Q Serve(g_s), s	19.4	26.3	26.4	0.0	0.0	1.9	12.1	0.0	0.0			
Cycle Q Clear(g_c), s	25.9	26.3	26.4	1.7	0.0	1.9	12.1	0.0	0.0			
Prop In Lane	0.15		0.05	0.04		0.08	0.83		0.11			
Lane Grp Cap(c), veh/h	781	725	787	842	0	780	816	0	0			
V/C Ratio(X)	0.74	0.77	0.77	0.40	0.00	0.41	0.39	0.00	0.00			
Avail Cap(c_a), veh/h	781	725	787	842	0	780	816	0	0			
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	14.4	14.9	14.9	1.7	0.0	1.7	17.3	0.0	0.0			
Incr Delay (d2), s/veh	6.3	7.8	7.3	1.4	0.0	1.6	1.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.5	12.6	13.6	1.1	0.0	1.1	6.1	0.0	0.0			
LnGrp Delay(d),s/veh	20.7	22.7	22.2	3.1	0.0	3.3	18.8	0.0	0.0			
LnGrp LOS	C	C	C	A		A	B					
Approach Vol, veh/h		1748			655			322				
Approach Delay, s/veh		21.9			3.2			18.8				
Approach LOS		C			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		50.0		50.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		45.0		44.0		45.0		
Max Q Clear Time (g_c+I1), s		28.4		14.1		3.9		
Green Ext Time (p_c), s		10.8		0.0		17.7		

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	560	30	905	79	495	497	0	0	0	6	215	94
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	622	0	1028	88	550	552				7	239	104
Adj No. of Lanes	1	0	2	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	392	0	2092	202	1175	707				479	503	405
Arrive On Green	0.14	0.00	0.67	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	0	3122	308	2351	1413				1774	1863	1558
Grp Volume(v), veh/h	622	0	1028	274	364	552				7	239	104
Grp Sat Flow(s),veh/h/ln	1774	0	1561	1116	1543	1413				1774	1863	1558
Q Serve(g_s), s	14.0	0.0	16.2	9.0	15.4	32.0				0.3	10.7	5.3
Cycle Q Clear(g_c), s	14.0	0.0	16.2	13.3	15.4	32.0				0.3	10.7	5.3
Prop In Lane	1.00		1.00	0.32		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	392	0	2092	606	771	707				479	503	405
V/C Ratio(X)	1.59	0.00	0.49	0.45	0.47	0.78				0.01	0.48	0.26
Avail Cap(c_a), veh/h	392	0	2092	606	771	707				479	503	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	8.1	15.2	16.4	20.5				26.8	30.6	29.3
Incr Delay (d2), s/veh	276.8	0.0	0.8	2.4	2.1	8.4				0.1	3.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	40.9	0.0	7.1	5.1	7.0	14.1				0.1	6.0	2.5
LnGrp Delay(d),s/veh	316.0	0.0	8.9	17.7	18.4	28.9				26.8	33.8	30.9
LnGrp LOS	F		A	B	B	C				C	C	C
Approach Vol, veh/h		1650			1190						350	
Approach Delay, s/veh		124.7			23.1						32.8	
Approach LOS		F			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	16.0	34.0				18.2		12.7
Green Ext Time (p_c), s	0.0	5.5				12.7		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	76.7
HCM 2010 LOS	E

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	141	131	12	28	282	0	0	360	73
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				157	146	13	31	313	0	0	400	81
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				789	829	705	351	848	0	0	848	720
Arrive On Green				0.44	0.44	0.44	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1774	1863	1583	910	1863	0	0	1863	1583
Grp Volume(v), veh/h				157	146	13	31	313	0	0	400	81
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	910	1863	0	0	1863	1583
Q Serve(g_s), s				5.4	4.7	0.5	2.4	11.0	0.0	0.0	14.9	2.9
Cycle Q Clear(g_c), s				5.4	4.7	0.5	17.4	11.0	0.0	0.0	14.9	2.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				789	829	705	351	848	0	0	848	720
V/C Ratio(X)				0.20	0.18	0.02	0.09	0.37	0.00	0.00	0.47	0.11
Avail Cap(c_a), veh/h				789	829	705	351	848	0	0	848	720
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				16.9	16.7	15.5	24.9	17.9	0.0	0.0	18.9	15.7
Incr Delay (d2), s/veh				0.6	0.5	0.0	0.5	1.2	0.0	0.0	1.9	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.7	2.5	0.2	0.7	5.9	0.0	0.0	8.1	1.3
LnGrp Delay(d),s/veh				17.5	17.2	15.6	25.4	19.1	0.0	0.0	20.8	16.0
LnGrp LOS				B	B	B	C	B			C	B
Approach Vol, veh/h					316			344			481	
Approach Delay, s/veh					17.3			19.7			20.0	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				19.4		7.4		16.9
Green Ext Time (p_c), s				5.3		0.9		5.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	1273	16	37	733	13	236	0	313	82	0	156
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	51	1819	23	53	1047	19	337	0	447	117	0	223
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	2715	34	74	1823	33	333	0	530	141	0	530
Arrive On Green	0.57	0.57	0.57	1.00	1.00	1.00	0.34	0.00	0.34	0.34	0.00	0.34
Sat Flow, veh/h	88	4721	59	3	3171	58	1153	0	1583	939	0	1583
Grp Volume(v), veh/h	644	597	652	53	509	557	337	0	447	117	0	223
Grp Sat Flow(s),veh/h/ln	1641	1543	1685	3	1543	1685	1153	0	1583	939	0	1583
Q Serve(g_s), s	7.9	26.8	26.9	26.4	0.0	0.0	22.6	0.0	26.2	7.3	0.0	10.9
Cycle Q Clear(g_c), s	24.5	26.8	26.9	26.4	0.0	0.0	33.5	0.0	26.2	33.5	0.0	10.9
Prop In Lane	0.08		0.04	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	982	887	969	0	887	969	333	0	530	141	0	530
V/C Ratio(X)	0.66	0.67	0.67	0.00	0.57	0.57	1.01	0.00	0.84	0.83	0.00	0.42
Avail Cap(c_a), veh/h	982	887	969	0	887	969	333	0	530	141	0	530
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	14.7	14.7	0.0	0.0	0.0	41.1	0.0	30.8	47.8	0.0	25.7
Incr Delay (d2), s/veh	3.4	4.1	3.7	0.0	2.5	2.3	52.7	0.0	11.8	32.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	12.3	13.3	0.0	0.6	0.6	14.0	0.0	13.2	4.5	0.0	4.8
LnGrp Delay(d),s/veh	17.3	18.8	18.5	0.0	2.5	2.3	94.0	0.0	42.6	80.0	0.0	26.3
LnGrp LOS	B	B	B		A	A	F		D	F		C
Approach Vol, veh/h		1893			1119			784			340	
Approach Delay, s/veh		18.2			2.2			64.7			44.8	
Approach LOS		B			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		62.0		38.0		62.0		38.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		43.5		33.5		57.5		33.5
Max Q Clear Time (g_c+I1), s		28.9		35.5		28.4		35.5
Green Ext Time (p_c), s		13.5		0.0		25.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	760	130	206	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	844	144	229	0	0

Major/Minor	Major2			Major1		
Conflicting Flow All	0	0	0	989	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	699	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	699	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	12.6
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	699	-	-	-	-	-	330
HCM Lane V/C Ratio	0.327	-	-	-	-	-	0.263
HCM Control Delay (s)	12.6	-	-	0	-	-	19.8
HCM Lane LOS	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.4	-	-	-	-	-	1

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	78
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	87

Major/Minor	Minor2		
Conflicting Flow All	917	1375	917
Stage 1	917	917	-
Stage 2	0	458	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	302	145	330
Stage 1	390	351	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	203	0	330
Mov Cap-2 Maneuver	203	0	-
Stage 1	390	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	19.8
HCM LOS	C

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	136	794	129	43	268	0	0	236	89
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.95	1.00		1.00	1.00		0.94
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				151	882	143	48	298	0	0	262	99
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				227	1396	659	124	738	0	0	620	234
Arrive On Green				0.45	0.45	0.44	0.49	0.49	0.00	0.00	0.49	0.48
Sat Flow, veh/h				504	3103	1499	168	1506	0	0	1266	478
Grp Volume(v), veh/h				551	482	143	346	0	0	0	0	361
Grp Sat Flow(s),veh/h/ln				1838	1770	1499	1674	0	0	0	0	1744
Q Serve(g_s), s				23.5	20.6	5.9	0.3	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				23.5	20.6	5.9	13.7	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.27		1.00	0.14		0.00	0.00		0.27
Lane Grp Cap(c), veh/h				827	796	659	861	0	0	0	0	855
V/C Ratio(X)				0.67	0.61	0.22	0.40	0.00	0.00	0.00	0.00	0.42
Avail Cap(c_a), veh/h				827	796	659	861	0	0	0	0	855
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				21.6	20.8	17.3	16.0	0.0	0.0	0.0	0.0	16.5
Incr Delay (d2), s/veh				4.2	3.4	0.8	1.4	0.0	0.0	0.0	0.0	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.9	10.8	2.6	6.3	0.0	0.0	0.0	0.0	6.8
LnGrp Delay(d),s/veh				25.8	24.2	18.1	17.4	0.0	0.0	0.0	0.0	18.0
LnGrp LOS				C	C	B	B					B
Approach Vol, veh/h					1176			346			361	
Approach Delay, s/veh					24.2			17.4			18.0	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				52.0		48.0		52.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				47.0		43.0		47.0
Max Q Clear Time (g_c+I1), s				15.7		25.5		15.4
Green Ext Time (p_c), s				3.3		0.0		3.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	312	74	89	284
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			347	82	99	316
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1376	325	58	161
Arrive On Green			0.31	0.31	1.00	1.00
Sat Flow, veh/h			1449	342	14	166
Grp Volume(v), veh/h			0	429	415	0
Grp Sat Flow(s),veh/h/ln			0	1791	180	0
Q Serve(g_s), s			0.0	17.9	1.1	0.0
Cycle Q Clear(g_c), s			0.0	17.9	1.1	0.0
Prop In Lane				0.19	0.24	
Lane Grp Cap(c), veh/h			0	1702	0	0
V/C Ratio(X)			0.00	0.25	0.00	0.00
Avail Cap(c_a), veh/h			0	1702	0	0
HCM Platoon Ratio			0.33	0.33	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	7.8	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	9.0	0.0	0.0
LnGrp Delay(d),s/veh			0.0	8.2	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			429			415
Approach Delay, s/veh			8.2			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				19.9				3.1
Green Ext Time (p_c), s				4.3				4.3

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	166	36	369	8	0	8	0	212	8	6	278	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	184	40	410	9	0	9	0	236	9	7	309	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	637	764	645	283	17	246	0	871	33	37	625	0
Arrive On Green	0.41	0.41	0.41	0.41	0.00	0.41	0.00	0.16	0.16	0.49	0.49	0.00
Sat Flow, veh/h	1400	1863	1574	559	42	600	0	1779	68	1	1275	0
Grp Volume(v), veh/h	184	40	410	18	0	0	0	0	245	316	0	0
Grp Sat Flow(s),veh/h/ln	1400	1863	1574	1201	0	0	0	0	1846	1276	0	0
Q Serve(g_s), s	9.0	1.3	20.8	0.0	0.0	0.0	0.0	0.0	11.6	10.6	0.0	0.0
Cycle Q Clear(g_c), s	9.6	1.3	20.8	0.6	0.0	0.0	0.0	0.0	11.6	10.6	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.04	0.02		0.00
Lane Grp Cap(c), veh/h	637	764	645	546	0	0	0	0	905	0	0	0
V/C Ratio(X)	0.29	0.05	0.64	0.03	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00
Avail Cap(c_a), veh/h	637	764	645	546	0	0	0	0	905	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	17.8	23.5	17.6	0.0	0.0	0.0	0.0	26.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.1	4.7	0.1	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.7	9.8	0.3	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0
LnGrp Delay(d),s/veh	21.6	17.9	28.3	17.7	0.0	0.0	0.0	0.0	27.0	0.0	0.0	0.0
LnGrp LOS	C	B	C	B					C			
Approach Vol, veh/h		634			18			245			316	
Approach Delay, s/veh		25.7			17.7			27.0			0.0	
Approach LOS		C			B			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		46.0		54.0		46.0		54.0
Change Period (Y+Rc), s		6.0		* 6		6.0		6.0
Max Green Setting (Gmax), s		40.0		* 28		40.0		48.0
Max Q Clear Time (g_c+I1), s		22.8		13.6		2.6		12.6
Green Ext Time (p_c), s		2.8		2.0		3.2		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	700	0	0	913	56	0	0	0	495	0	105
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	59	778	0	0	1014	62	0	0	0	550	0	117
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	2363	0	0	2034	864	0	2	0	493	0	105
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.36	0.00	0.36
Sat Flow, veh/h	233	4264	0	0	3632	1534	0	1863	0	1429	0	304
Grp Volume(v), veh/h	255	582	0	0	1014	62	0	0	0	667	0	0
Grp Sat Flow(s),veh/h/ln	1260	1543	0	0	1770	1534	0	1863	0	1732	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Prop In Lane	0.23		0.00	0.00		1.00	0.00		0.00	0.82		0.18
Lane Grp Cap(c), veh/h	760	1773	0	0	2034	864	0	2	0	597	0	0
V/C Ratio(X)	0.34	0.33	0.00	0.00	0.50	0.07	0.00	0.00	0.00	1.12	0.00	0.00
Avail Cap(c_a), veh/h	760	1773	0	0	2034	864	0	193	0	597	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.00	0.00	0.54	0.54	0.00	0.00	0.00	0.91	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	71.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	26.2	0.0	0.0
LnGrp Delay(d),s/veh	1.0	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	99.7	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		837			1076			0			667	
Approach Delay, s/veh		0.6			0.5			0.0			99.7	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		66.0		0.0		66.0		34.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		48.0		8.0		48.0		29.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		32.0
Green Ext Time (p_c), s		14.4		0.0		14.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	793	372	37	938	22	27	6	32	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.95	0.99		0.92	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	36	881	413	41	1042	24	30	7	36			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	69	1425	656	75	1537	35	297	69	356			
Arrive On Green	0.98	0.98	0.96	0.48	0.49	0.48	0.45	0.45	0.43			
Sat Flow, veh/h	61	2908	1339	75	3136	71	660	154	792			
Grp Volume(v), veh/h	431	475	424	544	0	563	73	0	0			
Grp Sat Flow(s),veh/h/ln	1390	1543	1375	1607	0	1675	1605	0	0			
Q Serve(g_s), s	10.7	1.6	3.1	7.6	0.0	25.9	2.7	0.0	0.0			
Cycle Q Clear(g_c), s	36.5	1.6	3.1	23.4	0.0	25.9	2.7	0.0	0.0			
Prop In Lane	0.08		0.97	0.08		0.04	0.41		0.49			
Lane Grp Cap(c), veh/h	720	756	674	810	0	821	722	0	0			
V/C Ratio(X)	0.60	0.63	0.63	0.67	0.00	0.69	0.10	0.00	0.00			
Avail Cap(c_a), veh/h	720	756	674	810	0	821	722	0	0			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.91	0.45	0.00	0.45	1.00	0.00	0.00			
Uniform Delay (d), s/veh	2.1	0.5	1.1	18.6	0.0	19.6	16.1	0.0	0.0			
Incr Delay (d2), s/veh	3.3	3.6	4.0	2.0	0.0	2.1	0.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.7	1.0	1.5	11.9	0.0	12.4	1.2	0.0	0.0			
LnGrp Delay(d),s/veh	5.4	4.1	5.1	20.6	0.0	21.7	16.4	0.0	0.0			
LnGrp LOS	A	A	A	C		C	B					
Approach Vol, veh/h		1330			1107			73				
Approach Delay, s/veh		4.9			21.2			16.4				
Approach LOS		A			C			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		52.0		48.0		52.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		47.0		42.0		47.0		
Max Q Clear Time (g_c+I1), s		38.5		4.7		27.9		
Green Ext Time (p_c), s		6.6		0.0		12.4		

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	138	152	541	387	751	293	0	0	0	42	303	241
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	153	493	385	430	834	326				47	337	268
Adj No. of Lanes	1	1	1	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	395	1248	1046	385	1102	431				479	503	405
Arrive On Green	0.23	1.00	1.00	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	1863	1561	626	2205	861				1774	1863	1558
Grp Volume(v), veh/h	153	493	385	430	583	577				47	337	268
Grp Sat Flow(s),veh/h/ln	1774	1863	1561	626	1543	1523				1774	1863	1558
Q Serve(g_s), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Prop In Lane	1.00		1.00	1.00		0.57				1.00		1.00
Lane Grp Cap(c), veh/h	395	1248	1046	385	771	762				479	503	405
V/C Ratio(X)	0.39	0.40	0.37	1.12	0.76	0.76				0.10	0.67	0.66
Avail Cap(c_a), veh/h	395	1248	1046	385	771	762				479	503	405
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	0.0	29.7	20.1	20.1				27.4	32.5	33.1
Incr Delay (d2), s/veh	2.8	0.9	1.0	81.6	6.8	6.9				0.4	6.9	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.3	0.3	19.3	14.3	14.1				1.0	9.2	7.6
LnGrp Delay(d),s/veh	32.0	0.9	1.0	111.3	26.9	27.0				27.8	39.5	41.3
LnGrp LOS	C	A	A	F	C	C				C	D	D
Approach Vol, veh/h		1031			1590						652	
Approach Delay, s/veh		5.6			49.8						39.4	
Approach LOS		A			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	2.0	52.0				2.0		18.1
Green Ext Time (p_c), s	3.5	0.0				5.4		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	367	407	13	25	95	0	0	464	79
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				408	452	14	28	106	0	0	516	88
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				825	866	720	294	885	0	0	885	736
Arrive On Green				0.47	0.47	0.46	0.47	0.47	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1774	1863	1583	812	1863	0	0	1863	1583
Grp Volume(v), veh/h				408	452	14	28	106	0	0	516	88
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	812	1863	0	0	1863	1583
Q Serve(g_s), s				16.0	17.1	0.5	2.6	3.2	0.0	0.0	20.1	3.1
Cycle Q Clear(g_c), s				16.0	17.1	0.5	22.7	3.2	0.0	0.0	20.1	3.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				825	866	720	294	885	0	0	885	736
V/C Ratio(X)				0.49	0.52	0.02	0.10	0.12	0.00	0.00	0.58	0.12
Avail Cap(c_a), veh/h				825	866	720	294	885	0	0	885	736
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.6	18.9	15.0	27.3	14.6	0.0	0.0	19.1	15.2
Incr Delay (d2), s/veh				2.1	2.2	0.0	0.6	0.3	0.0	0.0	2.8	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.3	9.3	0.2	0.6	1.7	0.0	0.0	11.0	1.4
LnGrp Delay(d),s/veh				20.7	21.1	15.0	27.9	14.9	0.0	0.0	21.9	15.5
LnGrp LOS				C	C	B	C	B			C	B
Approach Vol, veh/h					874			134			604	
Approach Delay, s/veh					20.8			17.6			20.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				24.7		19.1		22.1
Green Ext Time (p_c), s				4.5		2.8		4.6

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	205	586	204	308	858	56	16	0	22	15	0	20
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	315	902	314	474	1320	86	25	0	34	23	0	31
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	400	1915	667	84	2508	163	191	0	118	157	0	118
Arrive On Green	0.81	0.83	0.81	1.00	1.00	1.00	0.10	0.00	0.09	0.07	0.00	0.07
Sat Flow, veh/h	381	2297	800	2	3008	196	1373	0	1583	1369	0	1583
Grp Volume(v), veh/h	315	606	610	474	677	729	25	0	34	23	0	31
Grp Sat Flow(s),veh/h/ln	381	1543	1554	2	1543	1661	1373	0	1583	1369	0	1583
Q Serve(g_s), s	71.0	9.4	10.0	100.0	0.0	0.0	1.5	0.0	1.8	1.4	0.0	1.6
Cycle Q Clear(g_c), s	71.0	9.4	10.0	100.0	0.0	0.0	3.1	0.0	1.8	3.2	0.0	1.6
Prop In Lane	1.00		0.51	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	392	1286	1296	0	1286	1385	191	0	118	157	0	118
V/C Ratio(X)	0.80	0.47	0.47	0.00	0.53	0.53	0.13	0.00	0.29	0.15	0.00	0.26
Avail Cap(c_a), veh/h	392	1286	1296	0	1286	1385	386	0	344	352	0	344
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	2.0	2.2	0.0	0.0	0.0	37.8	0.0	37.8	39.8	0.0	38.2
Incr Delay (d2), s/veh	16.0	1.2	1.2	0.0	1.2	1.1	0.3	0.0	1.3	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	4.3	4.5	0.0	0.4	0.4	0.6	0.0	0.8	0.6	0.0	0.7
LnGrp Delay(d),s/veh	24.7	3.2	3.4	0.0	1.2	1.1	38.1	0.0	39.1	40.2	0.0	39.4
LnGrp LOS	C	A	A		A	A	D		D	D		D
Approach Vol, veh/h		1531			1880			59			54	
Approach Delay, s/veh		7.7			0.9			38.7			39.7	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		88.4		11.6		88.4		11.6
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		45.0		19.0		71.0		19.0
Max Q Clear Time (g_c+I1), s		73.0		5.1		102.0		5.2
Green Ext Time (p_c), s		0.0		0.4		0.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	5.1
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	354	130	208	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	393	144	231	0	0

Major/Minor	Major2			Major1		
Conflicting Flow All	0	0	0	538	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	1030	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	1030	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	9.5
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1030	-	-	-	-	-	597
HCM Lane V/C Ratio	0.224	-	-	-	-	-	0.097
HCM Control Delay (s)	9.5	-	-	0	-	-	11.7
HCM Lane LOS	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	-	-	0.3

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	52
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	58

Major/Minor	Minor2		
Conflicting Flow All	466	928	466
Stage 1	466	466	-
Stage 2	0	462	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	555	268	597
Stage 1	632	562	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	431	0	597
Mov Cap-2 Maneuver	431	0	-
Stage 1	632	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	11.7
HCM LOS	B

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	89	408	121	84	409	0	0	308	50
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.94	1.00		1.00	1.00		0.95
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				99	453	134	93	454	0	0	342	56
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				253	1224	596	151	694	0	0	820	134
Arrive On Green				0.41	0.41	0.40	0.53	0.53	0.00	0.00	0.53	0.52
Sat Flow, veh/h				617	2985	1490	206	1309	0	0	1548	253
Grp Volume(v), veh/h				294	258	134	547	0	0	0	0	398
Grp Sat Flow(s),veh/h/ln				1832	1770	1490	1515	0	0	0	0	1801
Q Serve(g_s), s				11.3	10.1	5.9	15.7	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				11.3	10.1	5.9	29.1	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.34		1.00	0.17		0.00	0.00		0.14
Lane Grp Cap(c), veh/h				751	726	596	845	0	0	0	0	955
V/C Ratio(X)				0.39	0.36	0.22	0.65	0.00	0.00	0.00	0.00	0.42
Avail Cap(c_a), veh/h				751	726	596	845	0	0	0	0	955
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				20.7	20.4	19.8	18.0	0.0	0.0	0.0	0.0	14.2
Incr Delay (d2), s/veh				1.5	1.4	0.9	3.8	0.0	0.0	0.0	0.0	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.0	5.1	2.6	12.3	0.0	0.0	0.0	0.0	7.0
LnGrp Delay(d),s/veh				22.3	21.7	20.7	21.8	0.0	0.0	0.0	0.0	15.6
LnGrp LOS				C	C	C	C					B
Approach Vol, veh/h					686			547			398	
Approach Delay, s/veh					21.8			21.8			15.6	
Approach LOS					C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				56.0		44.0		56.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				51.0		39.0		51.0
Max Q Clear Time (g_c+I1), s				31.1		13.3		15.4
Green Ext Time (p_c), s				4.4		0.0		4.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	494	222	109	289
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			549	247	121	321
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1146	516	61	139
Arrive On Green			1.00	1.00	1.00	1.00
Sat Flow, veh/h			1207	543	16	143
Grp Volume(v), veh/h			0	796	442	0
Grp Sat Flow(s),veh/h/ln			0	1749	159	0
Q Serve(g_s), s			0.0	0.0	1.6	0.0
Cycle Q Clear(g_c), s			0.0	0.0	1.6	0.0
Prop In Lane				0.31	0.27	
Lane Grp Cap(c), veh/h			0	1662	0	0
V/C Ratio(X)			0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h			0	1662	0	0
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh			0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh			0.0	1.0	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			796			442
Approach Delay, s/veh			1.0			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				2.0				3.6
Green Ext Time (p_c), s				8.8				8.8

Intersection Summary	
HCM 2010 Ctrl Delay	0.6
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	426	14	166	7	0	7	0	283	1	8	276	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.90	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	473	16	184	8	0	8	0	314	1	9	307	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	724	875	740	357	17	320	0	464	1	38	514	0
Arrive On Green	0.47	0.47	0.47	0.47	0.00	0.47	0.00	0.25	0.25	0.43	0.43	0.00
Sat Flow, veh/h	1402	1863	1575	645	36	682	0	1855	6	1	1195	0
Grp Volume(v), veh/h	473	16	184	16	0	0	0	0	315	316	0	0
Grp Sat Flow(s),veh/h/ln	1402	1863	1575	1363	0	0	0	0	1861	1196	0	0
Q Serve(g_s), s	27.3	0.5	7.0	0.0	0.0	0.0	0.0	0.0	15.3	11.9	0.0	0.0
Cycle Q Clear(g_c), s	27.8	0.5	7.0	0.5	0.0	0.0	0.0	0.0	15.3	11.9	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.00	0.03		0.00
Lane Grp Cap(c), veh/h	724	875	740	695	0	0	0	0	465	0	0	0
V/C Ratio(X)	0.65	0.02	0.25	0.02	0.00	0.00	0.00	0.00	0.68	0.00	0.00	0.00
Avail Cap(c_a), veh/h	724	875	740	695	0	0	0	0	465	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.6	14.2	15.9	14.2	0.0	0.0	0.0	0.0	33.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.0	0.8	0.1	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	0.2	3.2	0.2	0.0	0.0	0.0	0.0	8.9	0.0	0.0	0.0
LnGrp Delay(d),s/veh	26.2	14.2	16.7	14.2	0.0	0.0	0.0	0.0	41.6	0.0	0.0	0.0
LnGrp LOS	C	B	B	B					D			
Approach Vol, veh/h		673			16			315			316	
Approach Delay, s/veh		23.3			14.2			41.6			0.0	
Approach LOS		C			B			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		52.0		28.0		52.0		48.0
Change Period (Y+Rc), s		6.0		* 4		6.0		6.0
Max Green Setting (Gmax), s		46.0		* 24		46.0		42.0
Max Q Clear Time (g_c+I1), s		29.8		17.3		2.5		13.9
Green Ext Time (p_c), s		2.8		0.7		3.3		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	173	1329	0	0	663	136	0	0	0	240	0	172
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	211	1621	0	0	809	166	0	0	0	293	0	210
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	2269	0	0	2237	955	0	2	0	281	0	201
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.30	0.00	0.30
Sat Flow, veh/h	416	3742	0	0	3632	1539	0	1863	0	976	0	700
Grp Volume(v), veh/h	447	1385	0	0	809	166	0	0	0	503	0	0
Grp Sat Flow(s),veh/h/ln	920	1543	0	0	1770	1539	0	1863	0	1676	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Prop In Lane	0.47		0.00	0.00		1.00	0.00		0.00	0.58		0.42
Lane Grp Cap(c), veh/h	632	1950	0	0	2237	955	0	2	0	482	0	0
V/C Ratio(X)	0.71	0.71	0.00	0.00	0.36	0.17	0.00	0.00	0.00	1.04	0.00	0.00
Avail Cap(c_a), veh/h	632	1950	0	0	2237	955	0	193	0	482	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.00	0.00	0.90	0.90	0.00	0.00	0.00	0.95	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5	0.0	0.0
Incr Delay (d2), s/veh	3.8	1.3	0.0	0.0	0.4	0.4	0.0	0.0	0.0	52.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.0	18.5	0.0	0.0
LnGrp Delay(d),s/veh	3.8	1.3	0.0	0.0	0.4	0.4	0.0	0.0	0.0	82.6	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		1832			975			0			503	
Approach Delay, s/veh		1.9			0.4			0.0			82.6	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		71.0		0.0		71.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		53.0		8.0		53.0		24.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		27.0
Green Ext Time (p_c), s		29.9		0.0		29.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	1463	27	11	557	22	241	16	32	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.97		0.95	1.00		0.91	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	88	1626	30	12	619	24	268	18	36			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	136	2118	39	47	1533	59	679	46	91			
Arrive On Green	0.63	0.63	0.61	0.92	0.94	0.92	0.47	0.47	0.45			
Sat Flow, veh/h	201	4507	83	22	3261	125	1445	97	194			
Grp Volume(v), veh/h	578	559	607	337	0	318	322	0	0			
Grp Sat Flow(s),veh/h/ln	1572	1543	1675	1749	0	1659	1736	0	0			
Q Serve(g_s), s	19.3	26.2	26.3	0.0	0.0	1.9	12.1	0.0	0.0			
Cycle Q Clear(g_c), s	25.7	26.2	26.3	1.7	0.0	1.9	12.1	0.0	0.0			
Prop In Lane	0.15		0.05	0.04		0.08	0.83		0.11			
Lane Grp Cap(c), veh/h	781	725	787	842	0	780	816	0	0			
V/C Ratio(X)	0.74	0.77	0.77	0.40	0.00	0.41	0.39	0.00	0.00			
Avail Cap(c_a), veh/h	781	725	787	842	0	780	816	0	0			
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	14.4	14.8	14.9	1.7	0.0	1.7	17.3	0.0	0.0			
Incr Delay (d2), s/veh	6.2	7.8	7.2	1.4	0.0	1.6	1.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.5	12.5	13.5	1.1	0.0	1.1	6.1	0.0	0.0			
LnGrp Delay(d),s/veh	20.6	22.6	22.1	3.1	0.0	3.3	18.8	0.0	0.0			
LnGrp LOS	C	C	C	A		A	B					
Approach Vol, veh/h		1744			655			322				
Approach Delay, s/veh		21.8			3.2			18.8				
Approach LOS		C			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		50.0		50.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		45.0		44.0		45.0		
Max Q Clear Time (g_c+I1), s		28.3		14.1		3.9		
Green Ext Time (p_c), s		10.9		0.0		17.6		

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	560	30	905	79	495	497	0	0	0	6	215	94
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	622	0	1028	88	550	552				7	239	104
Adj No. of Lanes	1	0	2	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	392	0	2092	202	1175	707				479	503	405
Arrive On Green	0.14	0.00	0.67	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	0	3122	308	2351	1413				1774	1863	1558
Grp Volume(v), veh/h	622	0	1028	274	364	552				7	239	104
Grp Sat Flow(s),veh/h/ln	1774	0	1561	1116	1543	1413				1774	1863	1558
Q Serve(g_s), s	14.0	0.0	16.2	9.0	15.4	32.0				0.3	10.7	5.3
Cycle Q Clear(g_c), s	14.0	0.0	16.2	13.3	15.4	32.0				0.3	10.7	5.3
Prop In Lane	1.00		1.00	0.32		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	392	0	2092	606	771	707				479	503	405
V/C Ratio(X)	1.59	0.00	0.49	0.45	0.47	0.78				0.01	0.48	0.26
Avail Cap(c_a), veh/h	392	0	2092	606	771	707				479	503	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	8.1	15.2	16.4	20.5				26.8	30.6	29.3
Incr Delay (d2), s/veh	276.8	0.0	0.8	2.4	2.1	8.4				0.1	3.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	40.9	0.0	7.1	5.1	7.0	14.1				0.1	6.0	2.5
LnGrp Delay(d),s/veh	316.0	0.0	8.9	17.7	18.4	28.9				26.8	33.8	30.9
LnGrp LOS	F		A	B	B	C				C	C	C
Approach Vol, veh/h		1650			1190						350	
Approach Delay, s/veh		124.7			23.1						32.8	
Approach LOS		F			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	16.0	34.0				18.2		12.7
Green Ext Time (p_c), s	0.0	5.5				12.7		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	76.7
HCM 2010 LOS	E

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	141	131	12	28	282	0	0	360	73
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				157	146	13	31	313	0	0	400	81
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				789	829	705	351	848	0	0	848	720
Arrive On Green				0.44	0.44	0.44	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1774	1863	1583	910	1863	0	0	1863	1583
Grp Volume(v), veh/h				157	146	13	31	313	0	0	400	81
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	910	1863	0	0	1863	1583
Q Serve(g_s), s				5.4	4.7	0.5	2.4	11.0	0.0	0.0	14.9	2.9
Cycle Q Clear(g_c), s				5.4	4.7	0.5	17.4	11.0	0.0	0.0	14.9	2.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				789	829	705	351	848	0	0	848	720
V/C Ratio(X)				0.20	0.18	0.02	0.09	0.37	0.00	0.00	0.47	0.11
Avail Cap(c_a), veh/h				789	829	705	351	848	0	0	848	720
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				16.9	16.7	15.5	24.9	17.9	0.0	0.0	18.9	15.7
Incr Delay (d2), s/veh				0.6	0.5	0.0	0.5	1.2	0.0	0.0	1.9	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.7	2.5	0.2	0.7	5.9	0.0	0.0	8.1	1.3
LnGrp Delay(d),s/veh				17.5	17.2	15.6	25.4	19.1	0.0	0.0	20.8	16.0
LnGrp LOS				B	B	B	C	B			C	B
Approach Vol, veh/h					316			344			481	
Approach Delay, s/veh					17.3			19.7			20.0	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				19.4		7.4		16.9
Green Ext Time (p_c), s				5.3		0.9		5.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	1273	16	37	733	13	236	0	313	82	0	156
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	51	1819	23	53	1047	19	337	0	447	117	0	223
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	2715	34	74	1823	33	333	0	530	141	0	530
Arrive On Green	0.57	0.57	0.57	1.00	1.00	1.00	0.34	0.00	0.34	0.34	0.00	0.34
Sat Flow, veh/h	88	4721	59	3	3171	58	1153	0	1583	939	0	1583
Grp Volume(v), veh/h	644	597	652	53	509	557	337	0	447	117	0	223
Grp Sat Flow(s),veh/h/ln	1641	1543	1685	3	1543	1685	1153	0	1583	939	0	1583
Q Serve(g_s), s	7.9	26.8	26.9	26.4	0.0	0.0	22.6	0.0	26.2	7.3	0.0	10.9
Cycle Q Clear(g_c), s	24.5	26.8	26.9	26.4	0.0	0.0	33.5	0.0	26.2	33.5	0.0	10.9
Prop In Lane	0.08		0.04	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	982	887	969	0	887	969	333	0	530	141	0	530
V/C Ratio(X)	0.66	0.67	0.67	0.00	0.57	0.57	1.01	0.00	0.84	0.83	0.00	0.42
Avail Cap(c_a), veh/h	982	887	969	0	887	969	333	0	530	141	0	530
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	14.7	14.7	0.0	0.0	0.0	41.1	0.0	30.8	47.8	0.0	25.7
Incr Delay (d2), s/veh	3.4	4.1	3.7	0.0	2.5	2.3	52.7	0.0	11.8	32.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	12.3	13.3	0.0	0.6	0.6	14.0	0.0	13.2	4.5	0.0	4.8
LnGrp Delay(d),s/veh	17.3	18.8	18.5	0.0	2.5	2.3	94.0	0.0	42.6	80.0	0.0	26.3
LnGrp LOS	B	B	B		A	A	F		D	F		C
Approach Vol, veh/h		1893			1119			784			340	
Approach Delay, s/veh		18.2			2.2			64.7			44.8	
Approach LOS		B			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		62.0		38.0		62.0		38.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		43.5		33.5		57.5		33.5
Max Q Clear Time (g_c+I1), s		28.9		35.5		28.4		35.5
Green Ext Time (p_c), s		13.5		0.0		25.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	760	130	206	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	844	144	229	0	0

Major/Minor	Major2			Major1		
Conflicting Flow All	0	0	0	989	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	699	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	699	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	12.6
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	699	-	-	-	-	-	330
HCM Lane V/C Ratio	0.327	-	-	-	-	-	0.263
HCM Control Delay (s)	12.6	-	-	0	-	-	19.8
HCM Lane LOS	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.4	-	-	-	-	-	1

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	78
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	87

Major/Minor	Minor2		
Conflicting Flow All	917	1375	917
Stage 1	917	917	-
Stage 2	0	458	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	302	145	330
Stage 1	390	351	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	203	0	330
Mov Cap-2 Maneuver	203	0	-
Stage 1	390	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	19.8
HCM LOS	C

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	136	794	129	43	268	0	0	236	89
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.95	1.00		1.00	1.00		0.94
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				151	882	143	48	298	0	0	262	99
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				227	1396	659	124	738	0	0	620	234
Arrive On Green				0.45	0.45	0.44	0.49	0.49	0.00	0.00	0.49	0.48
Sat Flow, veh/h				504	3103	1499	168	1506	0	0	1266	478
Grp Volume(v), veh/h				551	482	143	346	0	0	0	0	361
Grp Sat Flow(s),veh/h/ln				1838	1770	1499	1674	0	0	0	0	1744
Q Serve(g_s), s				23.5	20.6	5.9	0.3	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				23.5	20.6	5.9	13.7	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.27		1.00	0.14		0.00	0.00		0.27
Lane Grp Cap(c), veh/h				827	796	659	861	0	0	0	0	855
V/C Ratio(X)				0.67	0.61	0.22	0.40	0.00	0.00	0.00	0.00	0.42
Avail Cap(c_a), veh/h				827	796	659	861	0	0	0	0	855
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				21.6	20.8	17.3	16.0	0.0	0.0	0.0	0.0	16.5
Incr Delay (d2), s/veh				4.2	3.4	0.8	1.4	0.0	0.0	0.0	0.0	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.9	10.8	2.6	6.3	0.0	0.0	0.0	0.0	6.8
LnGrp Delay(d),s/veh				25.8	24.2	18.1	17.4	0.0	0.0	0.0	0.0	18.0
LnGrp LOS				C	C	B	B					B
Approach Vol, veh/h					1176			346			361	
Approach Delay, s/veh					24.2			17.4			18.0	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				52.0		48.0		52.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				47.0		43.0		47.0
Max Q Clear Time (g_c+I1), s				15.7		25.5		15.4
Green Ext Time (p_c), s				3.3		0.0		3.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	312	74	89	284
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			347	82	99	316
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1376	325	58	161
Arrive On Green			0.31	0.31	1.00	1.00
Sat Flow, veh/h			1449	342	14	166
Grp Volume(v), veh/h			0	429	415	0
Grp Sat Flow(s),veh/h/ln			0	1791	180	0
Q Serve(g_s), s			0.0	17.9	1.1	0.0
Cycle Q Clear(g_c), s			0.0	17.9	1.1	0.0
Prop In Lane				0.19	0.24	
Lane Grp Cap(c), veh/h			0	1702	0	0
V/C Ratio(X)			0.00	0.25	0.00	0.00
Avail Cap(c_a), veh/h			0	1702	0	0
HCM Platoon Ratio			0.33	0.33	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	7.8	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	9.0	0.0	0.0
LnGrp Delay(d),s/veh			0.0	8.2	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			429			415
Approach Delay, s/veh			8.2			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				19.9				3.1
Green Ext Time (p_c), s				4.3				4.3

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	166	34	371	8	0	8	0	212	3	1	278	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	184	38	412	9	0	9	0	236	3	1	309	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	637	764	645	283	17	246	0	899	11	36	781	0
Arrive On Green	0.41	0.41	0.41	0.41	0.00	0.41	0.00	0.16	0.16	0.49	0.49	0.00
Sat Flow, veh/h	1400	1863	1574	559	42	600	0	1834	23	0	1594	0
Grp Volume(v), veh/h	184	38	412	18	0	0	0	0	239	310	0	0
Grp Sat Flow(s),veh/h/ln	1400	1863	1574	1201	0	0	0	0	1857	1594	0	0
Q Serve(g_s), s	9.0	1.2	20.9	0.0	0.0	0.0	0.0	0.0	11.3	10.2	0.0	0.0
Cycle Q Clear(g_c), s	9.6	1.2	20.9	0.6	0.0	0.0	0.0	0.0	11.3	10.2	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.01	0.00		0.00
Lane Grp Cap(c), veh/h	637	764	645	546	0	0	0	0	910	0	0	0
V/C Ratio(X)	0.29	0.05	0.64	0.03	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00
Avail Cap(c_a), veh/h	637	764	645	546	0	0	0	0	910	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	17.8	23.6	17.6	0.0	0.0	0.0	0.0	26.1	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.1	4.8	0.1	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.7	9.9	0.3	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	21.6	17.9	28.4	17.7	0.0	0.0	0.0	0.0	26.8	0.0	0.0	0.0
LnGrp LOS	C	B	C	B					C			
Approach Vol, veh/h		634			18			239			310	
Approach Delay, s/veh		25.8			17.7			26.8			0.0	
Approach LOS		C			B			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		46.0		54.0		46.0		54.0
Change Period (Y+Rc), s		6.0		* 6		6.0		6.0
Max Green Setting (Gmax), s		40.0		* 28		40.0		48.0
Max Q Clear Time (g_c+I1), s		22.9		13.3		2.6		12.2
Green Ext Time (p_c), s		2.8		1.9		3.2		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	700	0	0	913	52	0	0	0	495	0	105
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	59	778	0	0	1014	58	0	0	0	550	0	117
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	2365	0	0	2034	864	0	2	0	493	0	105
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.36	0.00	0.36
Sat Flow, veh/h	233	4267	0	0	3632	1534	0	1863	0	1429	0	304
Grp Volume(v), veh/h	256	581	0	0	1014	58	0	0	0	667	0	0
Grp Sat Flow(s),veh/h/ln	1262	1543	0	0	1770	1534	0	1863	0	1732	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Prop In Lane	0.23		0.00	0.00		1.00	0.00		0.00	0.82		0.18
Lane Grp Cap(c), veh/h	762	1773	0	0	2034	864	0	2	0	597	0	0
V/C Ratio(X)	0.34	0.33	0.00	0.00	0.50	0.07	0.00	0.00	0.00	1.12	0.00	0.00
Avail Cap(c_a), veh/h	762	1773	0	0	2034	864	0	193	0	597	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.00	0.00	0.54	0.54	0.00	0.00	0.00	0.91	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	71.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	26.2	0.0	0.0
LnGrp Delay(d),s/veh	1.0	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	99.7	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		837			1072			0			667	
Approach Delay, s/veh		0.6			0.5			0.0			99.7	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		66.0		0.0		66.0		34.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		48.0		8.0		48.0		29.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		32.0
Green Ext Time (p_c), s		14.3		0.0		14.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	793	372	37	934	22	27	6	32	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.95	0.99		0.92	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	36	881	413	41	1038	24	30	7	36			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	69	1426	657	75	1536	35	297	69	356			
Arrive On Green	0.98	0.98	0.96	0.48	0.49	0.48	0.45	0.45	0.43			
Sat Flow, veh/h	61	2911	1340	75	3135	72	660	154	792			
Grp Volume(v), veh/h	432	475	424	542	0	561	73	0	0			
Grp Sat Flow(s),veh/h/ln	1395	1543	1375	1607	0	1675	1605	0	0			
Q Serve(g_s), s	10.6	1.6	3.1	7.4	0.0	25.7	2.7	0.0	0.0			
Cycle Q Clear(g_c), s	36.3	1.6	3.1	23.3	0.0	25.7	2.7	0.0	0.0			
Prop In Lane	0.08		0.97	0.08		0.04	0.41		0.49			
Lane Grp Cap(c), veh/h	722	756	674	810	0	821	722	0	0			
V/C Ratio(X)	0.60	0.63	0.63	0.67	0.00	0.68	0.10	0.00	0.00			
Avail Cap(c_a), veh/h	722	756	674	810	0	821	722	0	0			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.91	0.45	0.00	0.45	1.00	0.00	0.00			
Uniform Delay (d), s/veh	2.1	0.5	1.1	18.6	0.0	19.6	16.1	0.0	0.0			
Incr Delay (d2), s/veh	3.3	3.6	4.0	2.0	0.0	2.1	0.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.7	1.0	1.4	11.8	0.0	12.3	1.2	0.0	0.0			
LnGrp Delay(d),s/veh	5.4	4.1	5.1	20.5	0.0	21.7	16.4	0.0	0.0			
LnGrp LOS	A	A	A	C		C	B					
Approach Vol, veh/h		1330			1103			73				
Approach Delay, s/veh		4.8			21.1			16.4				
Approach LOS		A			C			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		52.0		48.0		52.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		47.0		42.0		47.0		
Max Q Clear Time (g_c+I1), s		38.3		4.7		27.7		
Green Ext Time (p_c), s		6.8		0.0		12.5		

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	138	152	541	387	751	293	0	0	0	42	303	241
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	153	493	385	430	834	326				47	337	268
Adj No. of Lanes	1	1	1	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	395	1248	1046	385	1102	431				479	503	405
Arrive On Green	0.23	1.00	1.00	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	1863	1561	626	2205	861				1774	1863	1558
Grp Volume(v), veh/h	153	493	385	430	583	577				47	337	268
Grp Sat Flow(s),veh/h/ln	1774	1863	1561	626	1543	1523				1774	1863	1558
Q Serve(g_s), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Prop In Lane	1.00		1.00	1.00		0.57				1.00		1.00
Lane Grp Cap(c), veh/h	395	1248	1046	385	771	762				479	503	405
V/C Ratio(X)	0.39	0.40	0.37	1.12	0.76	0.76				0.10	0.67	0.66
Avail Cap(c_a), veh/h	395	1248	1046	385	771	762				479	503	405
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	0.0	29.7	20.1	20.1				27.4	32.5	33.1
Incr Delay (d2), s/veh	2.8	0.9	1.0	81.6	6.8	6.9				0.4	6.9	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.3	0.3	19.3	14.3	14.1				1.0	9.2	7.6
LnGrp Delay(d),s/veh	32.0	0.9	1.0	111.3	26.9	27.0				27.8	39.5	41.3
LnGrp LOS	C	A	A	F	C	C				C	D	D
Approach Vol, veh/h		1031			1590						652	
Approach Delay, s/veh		5.6			49.8						39.4	
Approach LOS		A			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	2.0	52.0				2.0		18.1
Green Ext Time (p_c), s	3.5	0.0				5.4		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	367	407	13	25	95	0	0	464	79
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				408	452	14	28	106	0	0	516	88
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				825	866	720	294	885	0	0	885	736
Arrive On Green				0.47	0.47	0.46	0.47	0.47	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1774	1863	1583	812	1863	0	0	1863	1583
Grp Volume(v), veh/h				408	452	14	28	106	0	0	516	88
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	812	1863	0	0	1863	1583
Q Serve(g_s), s				16.0	17.1	0.5	2.6	3.2	0.0	0.0	20.1	3.1
Cycle Q Clear(g_c), s				16.0	17.1	0.5	22.7	3.2	0.0	0.0	20.1	3.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				825	866	720	294	885	0	0	885	736
V/C Ratio(X)				0.49	0.52	0.02	0.10	0.12	0.00	0.00	0.58	0.12
Avail Cap(c_a), veh/h				825	866	720	294	885	0	0	885	736
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.6	18.9	15.0	27.3	14.6	0.0	0.0	19.1	15.2
Incr Delay (d2), s/veh				2.1	2.2	0.0	0.6	0.3	0.0	0.0	2.8	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.3	9.3	0.2	0.6	1.7	0.0	0.0	11.0	1.4
LnGrp Delay(d),s/veh				20.7	21.1	15.0	27.9	14.9	0.0	0.0	21.9	15.5
LnGrp LOS				C	C	B	C	B			C	B
Approach Vol, veh/h					874			134			604	
Approach Delay, s/veh					20.8			17.6			20.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				24.7		19.1		22.1
Green Ext Time (p_c), s				4.5		2.8		4.6

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	205	586	204	308	858	56	16	0	22	15	0	20
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	315	902	314	474	1320	86	25	0	34	23	0	31
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	400	1915	667	84	2508	163	191	0	118	157	0	118
Arrive On Green	0.81	0.83	0.81	1.00	1.00	1.00	0.10	0.00	0.09	0.07	0.00	0.07
Sat Flow, veh/h	381	2297	800	2	3008	196	1373	0	1583	1369	0	1583
Grp Volume(v), veh/h	315	606	610	474	677	729	25	0	34	23	0	31
Grp Sat Flow(s),veh/h/ln	381	1543	1554	2	1543	1661	1373	0	1583	1369	0	1583
Q Serve(g_s), s	71.0	9.4	10.0	100.0	0.0	0.0	1.5	0.0	1.8	1.4	0.0	1.6
Cycle Q Clear(g_c), s	71.0	9.4	10.0	100.0	0.0	0.0	3.1	0.0	1.8	3.2	0.0	1.6
Prop In Lane	1.00		0.51	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	392	1286	1296	0	1286	1385	191	0	118	157	0	118
V/C Ratio(X)	0.80	0.47	0.47	0.00	0.53	0.53	0.13	0.00	0.29	0.15	0.00	0.26
Avail Cap(c_a), veh/h	392	1286	1296	0	1286	1385	386	0	344	352	0	344
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	2.0	2.2	0.0	0.0	0.0	37.8	0.0	37.8	39.8	0.0	38.2
Incr Delay (d2), s/veh	16.0	1.2	1.2	0.0	1.2	1.1	0.3	0.0	1.3	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	4.3	4.5	0.0	0.4	0.4	0.6	0.0	0.8	0.6	0.0	0.7
LnGrp Delay(d),s/veh	24.7	3.2	3.4	0.0	1.2	1.1	38.1	0.0	39.1	40.2	0.0	39.4
LnGrp LOS	C	A	A		A	A	D		D	D		D
Approach Vol, veh/h		1531			1880			59			54	
Approach Delay, s/veh		7.7			0.9			38.7			39.7	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		88.4		11.6		88.4		11.6
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		45.0		19.0		71.0		19.0
Max Q Clear Time (g_c+I1), s		73.0		5.1		102.0		5.2
Green Ext Time (p_c), s		0.0		0.4		0.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	5.1
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	354	130	208	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	393	144	231	0	0

Major/Minor	Major2			Major1		
Conflicting Flow All	0	0	0	538	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	1030	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	1030	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	9.5
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1030	-	-	-	-	-	597
HCM Lane V/C Ratio	0.224	-	-	-	-	-	0.097
HCM Control Delay (s)	9.5	-	-	0	-	-	11.7
HCM Lane LOS	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	-	-	0.3

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	52
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	58

Major/Minor	Minor2		
Conflicting Flow All	466	928	466
Stage 1	466	466	-
Stage 2	0	462	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	555	268	597
Stage 1	632	562	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	431	0	597
Mov Cap-2 Maneuver	431	0	-
Stage 1	632	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	11.7
HCM LOS	B

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	89	408	121	84	409	0	0	297	52
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.94	1.00		1.00	1.00		0.95
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				99	453	134	93	454	0	0	330	58
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				253	1224	596	152	700	0	0	810	142
Arrive On Green				0.41	0.41	0.40	0.53	0.53	0.00	0.00	0.53	0.52
Sat Flow, veh/h				617	2985	1490	208	1322	0	0	1529	269
Grp Volume(v), veh/h				294	258	134	547	0	0	0	0	388
Grp Sat Flow(s),veh/h/ln				1832	1770	1490	1530	0	0	0	0	1798
Q Serve(g_s), s				11.3	10.1	5.9	15.5	0.0	0.0	0.0	0.0	13.0
Cycle Q Clear(g_c), s				11.3	10.1	5.9	28.4	0.0	0.0	0.0	0.0	13.0
Prop In Lane				0.34		1.00	0.17		0.00	0.00		0.15
Lane Grp Cap(c), veh/h				751	726	596	853	0	0	0	0	953
V/C Ratio(X)				0.39	0.36	0.22	0.64	0.00	0.00	0.00	0.00	0.41
Avail Cap(c_a), veh/h				751	726	596	853	0	0	0	0	953
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				20.7	20.4	19.8	17.8	0.0	0.0	0.0	0.0	14.1
Incr Delay (d2), s/veh				1.5	1.4	0.9	3.7	0.0	0.0	0.0	0.0	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.0	5.1	2.6	12.1	0.0	0.0	0.0	0.0	6.7
LnGrp Delay(d),s/veh				22.3	21.7	20.7	21.5	0.0	0.0	0.0	0.0	15.4
LnGrp LOS				C	C	C	C					B
Approach Vol, veh/h					686			547			388	
Approach Delay, s/veh					21.8			21.5			15.4	
Approach LOS					C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				56.0		44.0		56.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				51.0		39.0		51.0
Max Q Clear Time (g_c+I1), s				30.4		13.3		15.0
Green Ext Time (p_c), s				4.4		0.0		4.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	494	220	111	276
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			549	244	123	307
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1151	512	62	132
Arrive On Green			1.00	1.00	1.00	1.00
Sat Flow, veh/h			1212	539	16	136
Grp Volume(v), veh/h			0	793	430	0
Grp Sat Flow(s),veh/h/ln			0	1750	153	0
Q Serve(g_s), s			0.0	0.0	1.5	0.0
Cycle Q Clear(g_c), s			0.0	0.0	1.5	0.0
Prop In Lane				0.31	0.29	
Lane Grp Cap(c), veh/h			0	1663	0	0
V/C Ratio(X)			0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h			0	1663	0	0
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh			0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh			0.0	1.0	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			793			430
Approach Delay, s/veh			1.0			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				2.0				3.5
Green Ext Time (p_c), s				8.6				8.7

Intersection Summary	
HCM 2010 Ctrl Delay	0.6
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	426	14	166	7	0	7	0	281	6	13	263	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.90	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	473	16	184	8	0	8	0	312	7	14	292	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	724	875	740	357	17	320	0	452	10	38	456	0
Arrive On Green	0.47	0.47	0.47	0.47	0.00	0.47	0.00	0.25	0.25	0.43	0.43	0.00
Sat Flow, veh/h	1402	1863	1575	645	36	682	0	1810	41	2	1059	0
Grp Volume(v), veh/h	473	16	184	16	0	0	0	0	319	306	0	0
Grp Sat Flow(s),veh/h/ln	1402	1863	1575	1363	0	0	0	0	1850	1061	0	0
Q Serve(g_s), s	27.3	0.5	7.0	0.0	0.0	0.0	0.0	0.0	15.6	11.7	0.0	0.0
Cycle Q Clear(g_c), s	27.8	0.5	7.0	0.5	0.0	0.0	0.0	0.0	15.6	11.7	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.02	0.05		0.00
Lane Grp Cap(c), veh/h	724	875	740	695	0	0	0	0	463	0	0	0
V/C Ratio(X)	0.65	0.02	0.25	0.02	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.00
Avail Cap(c_a), veh/h	724	875	740	695	0	0	0	0	463	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.6	14.2	15.9	14.2	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.0	0.8	0.1	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	0.2	3.2	0.2	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	26.2	14.2	16.7	14.2	0.0	0.0	0.0	0.0	42.2	0.0	0.0	0.0
LnGrp LOS	C	B	B	B					D			
Approach Vol, veh/h		673			16			319			306	
Approach Delay, s/veh		23.3			14.2			42.2			0.0	
Approach LOS		C			B			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		52.0		28.0		52.0		48.0
Change Period (Y+Rc), s		6.0		* 4		6.0		6.0
Max Green Setting (Gmax), s		46.0		* 24		46.0		42.0
Max Q Clear Time (g_c+I1), s		29.8		17.6		2.5		13.7
Green Ext Time (p_c), s		2.8		0.7		3.3		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	173	1329	0	0	663	136	0	0	0	238	0	172
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	211	1621	0	0	809	166	0	0	0	290	0	210
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	2269	0	0	2237	955	0	2	0	279	0	202
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.30	0.00	0.30
Sat Flow, veh/h	416	3742	0	0	3632	1539	0	1863	0	972	0	704
Grp Volume(v), veh/h	447	1385	0	0	809	166	0	0	0	500	0	0
Grp Sat Flow(s),veh/h/ln	920	1543	0	0	1770	1539	0	1863	0	1676	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0
Prop In Lane	0.47		0.00	0.00		1.00	0.00		0.00	0.58		0.42
Lane Grp Cap(c), veh/h	632	1950	0	0	2237	955	0	2	0	481	0	0
V/C Ratio(X)	0.71	0.71	0.00	0.00	0.36	0.17	0.00	0.00	0.00	1.04	0.00	0.00
Avail Cap(c_a), veh/h	632	1950	0	0	2237	955	0	193	0	481	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.00	0.00	0.90	0.90	0.00	0.00	0.00	0.96	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5	0.0	0.0
Incr Delay (d2), s/veh	3.8	1.3	0.0	0.0	0.4	0.4	0.0	0.0	0.0	50.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.0	18.2	0.0	0.0
LnGrp Delay(d),s/veh	3.8	1.3	0.0	0.0	0.4	0.4	0.0	0.0	0.0	80.9	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		1832			975			0			500	
Approach Delay, s/veh		1.9			0.4			0.0			80.9	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		71.0		0.0		71.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		53.0		8.0		53.0		24.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		27.0
Green Ext Time (p_c), s		29.9		0.0		29.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	1461	27	11	557	22	241	16	32	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.97		0.95	1.00		0.91	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	88	1623	30	12	619	24	268	18	36			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	136	2118	39	48	1533	59	679	46	91			
Arrive On Green	0.63	0.63	0.61	0.92	0.94	0.92	0.47	0.47	0.45			
Sat Flow, veh/h	201	4506	83	22	3262	125	1445	97	194			
Grp Volume(v), veh/h	577	558	606	337	0	318	322	0	0			
Grp Sat Flow(s),veh/h/ln	1572	1543	1675	1750	0	1659	1736	0	0			
Q Serve(g_s), s	19.2	26.1	26.2	0.0	0.0	1.9	12.1	0.0	0.0			
Cycle Q Clear(g_c), s	25.6	26.1	26.2	1.7	0.0	1.9	12.1	0.0	0.0			
Prop In Lane	0.15		0.05	0.04		0.08	0.83		0.11			
Lane Grp Cap(c), veh/h	780	725	787	842	0	780	816	0	0			
V/C Ratio(X)	0.74	0.77	0.77	0.40	0.00	0.41	0.39	0.00	0.00			
Avail Cap(c_a), veh/h	780	725	787	842	0	780	816	0	0			
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	14.4	14.8	14.9	1.7	0.0	1.7	17.3	0.0	0.0			
Incr Delay (d2), s/veh	6.2	7.7	7.2	1.4	0.0	1.6	1.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.5	12.5	13.5	1.1	0.0	1.1	6.1	0.0	0.0			
LnGrp Delay(d),s/veh	20.6	22.6	22.0	3.1	0.0	3.3	18.8	0.0	0.0			
LnGrp LOS	C	C	C	A		A	B					
Approach Vol, veh/h		1741			655			322				
Approach Delay, s/veh		21.7			3.2			18.8				
Approach LOS		C			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		50.0		50.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		45.0		44.0		45.0		
Max Q Clear Time (g_c+I1), s		28.2		14.1		3.9		
Green Ext Time (p_c), s		10.9		0.0		17.6		

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	560	29	905	79	495	497	0	0	0	6	215	94
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	622	0	1027	88	550	552				7	239	104
Adj No. of Lanes	1	0	2	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	392	0	2092	202	1176	707				479	503	405
Arrive On Green	0.14	0.00	0.67	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	0	3122	308	2352	1413				1774	1863	1558
Grp Volume(v), veh/h	622	0	1027	274	364	552				7	239	104
Grp Sat Flow(s),veh/h/ln	1774	0	1561	1117	1543	1413				1774	1863	1558
Q Serve(g_s), s	14.0	0.0	16.2	9.0	15.4	32.0				0.3	10.7	5.3
Cycle Q Clear(g_c), s	14.0	0.0	16.2	13.3	15.4	32.0				0.3	10.7	5.3
Prop In Lane	1.00		1.00	0.32		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	392	0	2092	606	771	707				479	503	405
V/C Ratio(X)	1.59	0.00	0.49	0.45	0.47	0.78				0.01	0.48	0.26
Avail Cap(c_a), veh/h	392	0	2092	606	771	707				479	503	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	8.1	15.2	16.4	20.5				26.8	30.6	29.3
Incr Delay (d2), s/veh	276.8	0.0	0.8	2.4	2.1	8.4				0.1	3.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	40.9	0.0	7.1	5.1	7.0	14.1				0.1	6.0	2.5
LnGrp Delay(d),s/veh	316.0	0.0	8.9	17.7	18.4	28.9				26.8	33.8	30.9
LnGrp LOS	F		A	B	B	C				C	C	C
Approach Vol, veh/h		1649			1190						350	
Approach Delay, s/veh		124.8			23.1						32.8	
Approach LOS		F			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	16.0	34.0				18.2		12.7
Green Ext Time (p_c), s	0.0	5.5				12.7		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	76.7
HCM 2010 LOS	E

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	141	131	12	28	282	0	0	360	73
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				157	146	13	31	313	0	0	400	81
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				789	829	705	351	848	0	0	848	720
Arrive On Green				0.44	0.44	0.44	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1774	1863	1583	910	1863	0	0	1863	1583
Grp Volume(v), veh/h				157	146	13	31	313	0	0	400	81
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	910	1863	0	0	1863	1583
Q Serve(g_s), s				5.4	4.7	0.5	2.4	11.0	0.0	0.0	14.9	2.9
Cycle Q Clear(g_c), s				5.4	4.7	0.5	17.4	11.0	0.0	0.0	14.9	2.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				789	829	705	351	848	0	0	848	720
V/C Ratio(X)				0.20	0.18	0.02	0.09	0.37	0.00	0.00	0.47	0.11
Avail Cap(c_a), veh/h				789	829	705	351	848	0	0	848	720
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				16.9	16.7	15.5	24.9	17.9	0.0	0.0	18.9	15.7
Incr Delay (d2), s/veh				0.6	0.5	0.0	0.5	1.2	0.0	0.0	1.9	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.7	2.5	0.2	0.7	5.9	0.0	0.0	8.1	1.3
LnGrp Delay(d),s/veh				17.5	17.2	15.6	25.4	19.1	0.0	0.0	20.8	16.0
LnGrp LOS				B	B	B	C	B			C	B
Approach Vol, veh/h					316			344			481	
Approach Delay, s/veh					17.3			19.7			20.0	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				19.4		7.4		16.9
Green Ext Time (p_c), s				5.3		0.9		5.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	1273	16	37	733	13	236	0	313	82	0	156
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	51	1819	23	53	1047	19	337	0	447	117	0	223
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	2715	34	74	1823	33	333	0	530	141	0	530
Arrive On Green	0.57	0.57	0.57	1.00	1.00	1.00	0.34	0.00	0.34	0.34	0.00	0.34
Sat Flow, veh/h	88	4721	59	3	3171	58	1153	0	1583	939	0	1583
Grp Volume(v), veh/h	644	597	652	53	509	557	337	0	447	117	0	223
Grp Sat Flow(s),veh/h/ln	1641	1543	1685	3	1543	1685	1153	0	1583	939	0	1583
Q Serve(g_s), s	7.9	26.8	26.9	26.4	0.0	0.0	22.6	0.0	26.2	7.3	0.0	10.9
Cycle Q Clear(g_c), s	24.5	26.8	26.9	26.4	0.0	0.0	33.5	0.0	26.2	33.5	0.0	10.9
Prop In Lane	0.08		0.04	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	982	887	969	0	887	969	333	0	530	141	0	530
V/C Ratio(X)	0.66	0.67	0.67	0.00	0.57	0.57	1.01	0.00	0.84	0.83	0.00	0.42
Avail Cap(c_a), veh/h	982	887	969	0	887	969	333	0	530	141	0	530
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	14.7	14.7	0.0	0.0	0.0	41.1	0.0	30.8	47.8	0.0	25.7
Incr Delay (d2), s/veh	3.4	4.1	3.7	0.0	2.5	2.3	52.7	0.0	11.8	32.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	12.3	13.3	0.0	0.6	0.6	14.0	0.0	13.2	4.5	0.0	4.8
LnGrp Delay(d),s/veh	17.3	18.8	18.5	0.0	2.5	2.3	94.0	0.0	42.6	80.0	0.0	26.3
LnGrp LOS	B	B	B		A	A	F		D	F		C
Approach Vol, veh/h		1893			1119			784			340	
Approach Delay, s/veh		18.2			2.2			64.7			44.8	
Approach LOS		B			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		62.0		38.0		62.0		38.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		43.5		33.5		57.5		33.5
Max Q Clear Time (g_c+I1), s		28.9		35.5		28.4		35.5
Green Ext Time (p_c), s		13.5		0.0		25.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	0	0	0	0	760	130	208	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	844	144	231	0	0

Major/Minor	Major2			Major1		
Conflicting Flow All	0	0	0	989	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	-	699	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-		-	-
Mov Cap-1 Maneuver	-	-	-	699	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	0	12.7
HCM LOS		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	699	-	-	-	-	-	330
HCM Lane V/C Ratio	0.331	-	-	-	-	-	0.263
HCM Control Delay (s)	12.7	-	-	0	-	-	19.8
HCM Lane LOS	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.4	-	-	-	-	-	1

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	0	78
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	0	87

Major/Minor	Minor2		
Conflicting Flow All	917	1379	917
Stage 1	917	917	-
Stage 2	0	462	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	302	144	330
Stage 1	390	351	-
Stage 2	-	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	202	0	330
Mov Cap-2 Maneuver	202	0	-
Stage 1	390	0	-
Stage 2	-	0	-

Approach	SB
HCM Control Delay, s	19.8
HCM LOS	C

Minor Lane/Major Mvmt

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	136	794	131	43	257	0	0	236	89
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.95	1.00		1.00	1.00		0.94
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	186.3	186.3	190.0	186.3	0.0	0.0	186.3	190.0
Adj Flow Rate, veh/h				151	882	146	48	286	0	0	262	99
Adj No. of Lanes				0	2	1	0	1	0	0	1	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				227	1396	659	126	725	0	0	620	234
Arrive On Green				0.45	0.45	0.44	0.49	0.49	0.00	0.00	0.49	0.48
Sat Flow, veh/h				504	3103	1499	174	1479	0	0	1266	478
Grp Volume(v), veh/h				551	482	146	334	0	0	0	0	361
Grp Sat Flow(s),veh/h/ln				1838	1770	1499	1653	0	0	0	0	1744
Q Serve(g_s), s				23.5	20.6	6.0	0.4	0.0	0.0	0.0	0.0	13.4
Cycle Q Clear(g_c), s				23.5	20.6	6.0	13.8	0.0	0.0	0.0	0.0	13.4
Prop In Lane				0.27		1.00	0.14		0.00	0.00		0.27
Lane Grp Cap(c), veh/h				827	796	659	851	0	0	0	0	855
V/C Ratio(X)				0.67	0.61	0.22	0.39	0.00	0.00	0.00	0.00	0.42
Avail Cap(c_a), veh/h				827	796	659	851	0	0	0	0	855
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				21.6	20.8	17.4	15.9	0.0	0.0	0.0	0.0	16.5
Incr Delay (d2), s/veh				4.2	3.4	0.8	1.4	0.0	0.0	0.0	0.0	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.9	10.8	2.6	6.0	0.0	0.0	0.0	0.0	6.8
LnGrp Delay(d),s/veh				25.8	24.2	18.1	17.2	0.0	0.0	0.0	0.0	18.0
LnGrp LOS				C	C	B	B					B
Approach Vol, veh/h					1179			334			361	
Approach Delay, s/veh					24.2			17.2			18.0	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				52.0		48.0		52.0
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				47.0		43.0		47.0
Max Q Clear Time (g_c+I1), s				15.8		25.5		15.4
Green Ext Time (p_c), s				3.2		0.0		3.2

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	301	74	89	284
Number			4	14	3	8
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			186.3	190.0	190.0	186.3
Adj Flow Rate, veh/h			334	82	99	316
Adj No. of Lanes			1	0	0	1
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1365	335	58	161
Arrive On Green			0.31	0.31	1.00	1.00
Sat Flow, veh/h			1436	353	14	166
Grp Volume(v), veh/h			0	416	415	0
Grp Sat Flow(s),veh/h/ln			0	1789	180	0
Q Serve(g_s), s			0.0	17.3	1.1	0.0
Cycle Q Clear(g_c), s			0.0	17.3	1.1	0.0
Prop In Lane				0.20	0.24	
Lane Grp Cap(c), veh/h			0	1700	0	0
V/C Ratio(X)			0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h			0	1700	0	0
HCM Platoon Ratio			0.33	0.33	2.00	2.00
Upstream Filter(I)			0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			0.0	7.7	0.0	0.0
Incr Delay (d2), s/veh			0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.0	8.7	0.0	0.0
LnGrp Delay(d),s/veh			0.0	8.0	0.0	0.0
LnGrp LOS				A		
Approach Vol, veh/h			416			415
Approach Delay, s/veh			8.0			0.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				100.0				100.0
Change Period (Y+Rc), s				* 6				6.0
Max Green Setting (Gmax), s				* 74				94.0
Max Q Clear Time (g_c+I1), s				19.3				3.1
Green Ext Time (p_c), s				4.2				4.2

Intersection Summary	
HCM 2010 Ctrl Delay	4.0
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	168	34	369	8	0	8	0	199	8	6	278	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0	0.0	186.3	190.0	190.0	186.3	0.0
Adj Flow Rate, veh/h	187	38	410	9	0	9	0	221	9	7	309	0
Adj No. of Lanes	1	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	0
Cap, veh/h	637	764	645	283	17	246	0	869	35	37	625	0
Arrive On Green	0.41	0.41	0.41	0.41	0.00	0.41	0.00	0.16	0.16	0.49	0.49	0.00
Sat Flow, veh/h	1400	1863	1574	559	42	601	0	1773	72	1	1275	0
Grp Volume(v), veh/h	187	38	410	18	0	0	0	0	230	316	0	0
Grp Sat Flow(s),veh/h/ln	1400	1863	1574	1202	0	0	0	0	1845	1276	0	0
Q Serve(g_s), s	9.2	1.2	20.8	0.0	0.0	0.0	0.0	0.0	10.9	10.6	0.0	0.0
Cycle Q Clear(g_c), s	9.8	1.2	20.8	0.6	0.0	0.0	0.0	0.0	10.9	10.6	0.0	0.0
Prop In Lane	1.00		1.00	0.50		0.50	0.00		0.04	0.02		0.00
Lane Grp Cap(c), veh/h	637	764	645	547	0	0	0	0	904	0	0	0
V/C Ratio(X)	0.29	0.05	0.64	0.03	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00
Avail Cap(c_a), veh/h	637	764	645	547	0	0	0	0	904	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	17.8	23.5	17.6	0.0	0.0	0.0	0.0	25.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.1	4.7	0.1	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.7	9.8	0.3	0.0	0.0	0.0	0.0	5.7	0.0	0.0	0.0
LnGrp Delay(d),s/veh	21.7	17.9	28.3	17.7	0.0	0.0	0.0	0.0	26.6	0.0	0.0	0.0
LnGrp LOS	C	B	C	B					C			
Approach Vol, veh/h		635			18			230			316	
Approach Delay, s/veh		25.7			17.7			26.6			0.0	
Approach LOS		C			B			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		46.0		54.0		46.0		54.0
Change Period (Y+Rc), s		6.0		* 6		6.0		6.0
Max Green Setting (Gmax), s		40.0		* 28		40.0		48.0
Max Q Clear Time (g_c+I1), s		22.8		12.9		2.6		12.6
Green Ext Time (p_c), s		2.8		2.0		3.2		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	700	0	0	913	50	0	0	0	495	0	105
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	186.3	190.0	186.3	190.0	190.0	186.3	190.0
Adj Flow Rate, veh/h	59	778	0	0	1014	56	0	0	0	550	0	117
Adj No. of Lanes	0	3	0	0	2	1	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	2365	0	0	2034	864	0	2	0	493	0	105
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.36	0.00	0.36
Sat Flow, veh/h	233	4268	0	0	3632	1534	0	1863	0	1429	0	304
Grp Volume(v), veh/h	256	581	0	0	1014	56	0	0	0	667	0	0
Grp Sat Flow(s),veh/h/ln	1263	1543	0	0	1770	1534	0	1863	0	1732	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Prop In Lane	0.23		0.00	0.00		1.00	0.00		0.00	0.82		0.18
Lane Grp Cap(c), veh/h	762	1773	0	0	2034	864	0	2	0	597	0	0
V/C Ratio(X)	0.34	0.33	0.00	0.00	0.50	0.06	0.00	0.00	0.00	1.12	0.00	0.00
Avail Cap(c_a), veh/h	762	1773	0	0	2034	864	0	193	0	597	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.00	0.00	0.55	0.55	0.00	0.00	0.00	0.91	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	71.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	26.2	0.0	0.0
LnGrp Delay(d),s/veh	1.0	0.4	0.0	0.0	0.5	0.1	0.0	0.0	0.0	99.7	0.0	0.0
LnGrp LOS	A	A			A	A				F		
Approach Vol, veh/h		837			1070			0			667	
Approach Delay, s/veh		0.6			0.5			0.0			99.7	
Approach LOS		A			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		66.0		0.0		66.0		34.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		48.0		8.0		48.0		29.0
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		32.0
Green Ext Time (p_c), s		14.3		0.0		14.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	793	372	37	932	22	27	6	32	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.95	0.99		0.92	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	190.0	186.3	190.0			
Adj Flow Rate, veh/h	36	881	413	41	1036	24	30	7	36			
Adj No. of Lanes	0	3	0	0	2	0	0	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	69	1427	657	76	1536	35	297	69	356			
Arrive On Green	0.98	0.98	0.96	0.48	0.49	0.48	0.45	0.45	0.43			
Sat Flow, veh/h	61	2912	1341	75	3134	72	660	154	792			
Grp Volume(v), veh/h	432	474	423	541	0	560	73	0	0			
Grp Sat Flow(s),veh/h/ln	1397	1543	1374	1606	0	1675	1605	0	0			
Q Serve(g_s), s	10.5	1.6	3.1	7.3	0.0	25.7	2.7	0.0	0.0			
Cycle Q Clear(g_c), s	36.1	1.6	3.1	23.2	0.0	25.7	2.7	0.0	0.0			
Prop In Lane	0.08		0.98	0.08		0.04	0.41		0.49			
Lane Grp Cap(c), veh/h	724	756	673	810	0	821	722	0	0			
V/C Ratio(X)	0.60	0.63	0.63	0.67	0.00	0.68	0.10	0.00	0.00			
Avail Cap(c_a), veh/h	724	756	673	810	0	821	722	0	0			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.91	0.45	0.00	0.45	1.00	0.00	0.00			
Uniform Delay (d), s/veh	2.1	0.5	1.1	18.5	0.0	19.6	16.1	0.0	0.0			
Incr Delay (d2), s/veh	3.3	3.6	4.0	2.0	0.0	2.1	0.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.5	1.0	1.4	11.8	0.0	12.3	1.2	0.0	0.0			
LnGrp Delay(d),s/veh	5.3	4.1	5.1	20.5	0.0	21.6	16.4	0.0	0.0			
LnGrp LOS	A	A	A	C		C	B					
Approach Vol, veh/h		1330			1101			73				
Approach Delay, s/veh		4.8			21.1			16.4				
Approach LOS		A			C			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		52.0		48.0		52.0		
Change Period (Y+Rc), s		5.0		6.0		5.0		
Max Green Setting (Gmax), s		47.0		42.0		47.0		
Max Q Clear Time (g_c+I1), s		38.1		4.7		27.7		
Green Ext Time (p_c), s		6.9		0.0		12.5		

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	138	152	541	387	750	293	0	0	0	42	303	241
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.98				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	190.0	186.3	190.0				186.3	186.3	186.3
Adj Flow Rate, veh/h	153	493	385	430	833	326				47	337	268
Adj No. of Lanes	1	1	1	0	3	0				1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	396	1248	1046	385	1102	431				479	503	405
Arrive On Green	0.23	1.00	1.00	0.50	0.50	0.50				0.27	0.27	0.26
Sat Flow, veh/h	1774	1863	1561	626	2204	862				1774	1863	1558
Grp Volume(v), veh/h	153	493	385	430	583	576				47	337	268
Grp Sat Flow(s),veh/h/ln	1774	1863	1561	626	1543	1523				1774	1863	1558
Q Serve(g_s), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	50.0	30.4	30.4				2.0	16.1	15.4
Prop In Lane	1.00		1.00	1.00		0.57				1.00		1.00
Lane Grp Cap(c), veh/h	396	1248	1046	385	771	762				479	503	405
V/C Ratio(X)	0.39	0.40	0.37	1.12	0.76	0.76				0.10	0.67	0.66
Avail Cap(c_a), veh/h	396	1248	1046	385	771	762				479	503	405
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	0.0	29.7	20.1	20.1				27.4	32.5	33.1
Incr Delay (d2), s/veh	2.8	0.9	1.0	81.6	6.8	6.9				0.4	6.9	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.3	0.3	19.3	14.2	14.1				1.0	9.2	7.6
LnGrp Delay(d),s/veh	32.0	0.9	1.0	111.3	26.9	27.0				27.8	39.5	41.3
LnGrp LOS	C	A	A	F	C	C				C	D	D
Approach Vol, veh/h		1031			1589						652	
Approach Delay, s/veh		5.6			49.8						39.4	
Approach LOS		A			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	53.0				70.0		30.0
Change Period (Y+Rc), s	5.0	5.0				5.0		5.0
Max Green Setting (Gmax), s	12.0	48.0				65.0		25.0
Max Q Clear Time (g_c+I1), s	2.0	52.0				2.0		18.1
Green Ext Time (p_c), s	3.5	0.0				5.4		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	367	407	13	25	95	0	0	464	79
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				408	452	14	28	106	0	0	516	88
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				825	866	720	294	885	0	0	885	736
Arrive On Green				0.47	0.47	0.46	0.47	0.47	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1774	1863	1583	812	1863	0	0	1863	1583
Grp Volume(v), veh/h				408	452	14	28	106	0	0	516	88
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	812	1863	0	0	1863	1583
Q Serve(g_s), s				16.0	17.1	0.5	2.6	3.2	0.0	0.0	20.1	3.1
Cycle Q Clear(g_c), s				16.0	17.1	0.5	22.7	3.2	0.0	0.0	20.1	3.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				825	866	720	294	885	0	0	885	736
V/C Ratio(X)				0.49	0.52	0.02	0.10	0.12	0.00	0.00	0.58	0.12
Avail Cap(c_a), veh/h				825	866	720	294	885	0	0	885	736
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.6	18.9	15.0	27.3	14.6	0.0	0.0	19.1	15.2
Incr Delay (d2), s/veh				2.1	2.2	0.0	0.6	0.3	0.0	0.0	2.8	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.3	9.3	0.2	0.6	1.7	0.0	0.0	11.0	1.4
LnGrp Delay(d),s/veh				20.7	21.1	15.0	27.9	14.9	0.0	0.0	21.9	15.5
LnGrp LOS				C	C	B	C	B			C	B
Approach Vol, veh/h					874			134			604	
Approach Delay, s/veh					20.8			17.6			20.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				24.7		19.1		22.1
Green Ext Time (p_c), s				4.5		2.8		4.6

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	205	586	204	308	858	56	16	0	22	15	0	20
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	315	902	314	474	1320	86	25	0	34	23	0	31
Adj No. of Lanes	0	3	0	0	3	0	1	1	0	1	1	0
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	400	1915	667	84	2508	163	191	0	118	157	0	118
Arrive On Green	0.81	0.83	0.81	1.00	1.00	1.00	0.10	0.00	0.09	0.07	0.00	0.07
Sat Flow, veh/h	381	2297	800	2	3008	196	1373	0	1583	1369	0	1583
Grp Volume(v), veh/h	315	606	610	474	677	729	25	0	34	23	0	31
Grp Sat Flow(s),veh/h/ln	381	1543	1554	2	1543	1661	1373	0	1583	1369	0	1583
Q Serve(g_s), s	71.0	9.4	10.0	100.0	0.0	0.0	1.5	0.0	1.8	1.4	0.0	1.6
Cycle Q Clear(g_c), s	71.0	9.4	10.0	100.0	0.0	0.0	3.1	0.0	1.8	3.2	0.0	1.6
Prop In Lane	1.00		0.51	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	392	1286	1296	0	1286	1385	191	0	118	157	0	118
V/C Ratio(X)	0.80	0.47	0.47	0.00	0.53	0.53	0.13	0.00	0.29	0.15	0.00	0.26
Avail Cap(c_a), veh/h	392	1286	1296	0	1286	1385	386	0	344	352	0	344
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	2.0	2.2	0.0	0.0	0.0	37.8	0.0	37.8	39.8	0.0	38.2
Incr Delay (d2), s/veh	16.0	1.2	1.2	0.0	1.2	1.1	0.3	0.0	1.3	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	4.3	4.5	0.0	0.4	0.4	0.6	0.0	0.8	0.6	0.0	0.7
LnGrp Delay(d),s/veh	24.7	3.2	3.4	0.0	1.2	1.1	38.1	0.0	39.1	40.2	0.0	39.4
LnGrp LOS	C	A	A		A	A	D		D	D		D
Approach Vol, veh/h		1531			1880			59			54	
Approach Delay, s/veh		7.7			0.9			38.7			39.7	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		88.4		11.6		88.4		11.6
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		45.0		19.0		71.0		19.0
Max Q Clear Time (g_c+I1), s		73.0		5.1		102.0		5.2
Green Ext Time (p_c), s		0.0		0.4		0.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	5.1
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	0	540	125	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	600	139	0	56

Major/Minor	Major2		Minor2	
Conflicting Flow All	-	0	669	669
Stage 1	-	-	669	-
Stage 2	-	-	0	-
Critical Hdwy	-	-	7.12	6.22
Critical Hdwy Stg 1	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	371	458
Stage 1	-	-	447	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	371	458
Mov Cap-2 Maneuver	-	-	371	-
Stage 1	-	-	447	-
Stage 2	-	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	13.9
HCM LOS		B

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	458
HCM Lane V/C Ratio	-	-	0.121
HCM Control Delay (s)	-	-	13.9
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	136	126	12	27	271	0	0	346	70
Number				1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Adj Flow Rate, veh/h				151	140	13	30	301	0	0	384	78
Adj No. of Lanes				1	1	1	1	1	0	0	1	1
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				789	829	705	362	848	0	0	848	720
Arrive On Green				0.44	0.44	0.44	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1774	1863	1583	926	1863	0	0	1863	1583
Grp Volume(v), veh/h				151	140	13	30	301	0	0	384	78
Grp Sat Flow(s),veh/h/ln				1774	1863	1583	926	1863	0	0	1863	1583
Q Serve(g_s), s				5.2	4.5	0.5	2.3	10.5	0.0	0.0	14.2	2.8
Cycle Q Clear(g_c), s				5.2	4.5	0.5	16.5	10.5	0.0	0.0	14.2	2.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				789	829	705	362	848	0	0	848	720
V/C Ratio(X)				0.19	0.17	0.02	0.08	0.36	0.00	0.00	0.45	0.11
Avail Cap(c_a), veh/h				789	829	705	362	848	0	0	848	720
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				16.8	16.7	15.5	24.4	17.7	0.0	0.0	18.7	15.6
Incr Delay (d2), s/veh				0.5	0.4	0.0	0.4	1.2	0.0	0.0	1.7	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.6	2.4	0.2	0.6	5.6	0.0	0.0	7.7	1.3
LnGrp Delay(d),s/veh				17.4	17.1	15.6	24.8	18.9	0.0	0.0	20.5	15.9
LnGrp LOS				B	B	B	C	B			C	B
Approach Vol, veh/h					304			331			462	
Approach Delay, s/veh					17.2			19.4			19.7	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				50.5		49.5		50.5
Change Period (Y+Rc), s				5.0		5.0		5.0
Max Green Setting (Gmax), s				45.5		44.5		45.5
Max Q Clear Time (g_c+I1), s				18.5		7.2		16.2
Green Ext Time (p_c), s				5.0		0.9		5.1

Intersection Summary		
HCM 2010 Ctrl Delay		18.9
HCM 2010 LOS		B

APPENDIX D

AIR QUALITY CALCULATIONS

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CONSTRUCTION EMISSIONS - ALTERNATIVE 1

Table 1. Building Demolition - Alternative 1

124,460 SF 6,223 Estimated CY of debris based on 20 SF/CY

				VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO_2 g/hp-hr	PM_{10} g/hp-hr	$PM_{2.5}$ g/hp-hr	CO_2 g/hp-hr	VOC lb	CO lb	NOx lb	SO_2 lb	PM_{10} lb	$PM_{2.5}$ lb	CO_2 kg
Hydraulic excavator	1,037	86	0.59	0.23	2.57	2.68	0.11	0.40	0.39	595.46	26.56	298.16	310.94	13.19	46.74	45.34	31,332
Loader / Backhoe	1,037	87	0.23	1.07	6.13	5.02	0.14	0.95	0.92	692.77	48.81	280.33	229.71	6.47	43.40	42.10	14,375
air compressor	1,037	49	0.59	0.26	1.41	3.51	0.11	0.23	0.22	536.20	17.35	93.12	231.87	7.13	15.33	14.87	16,075
On-road Equipment	**Cumulative Hours**	**Engine HP**	**Speed (mph)**	**VOC** lb/mile	**CO** lb/mile	**NOx** lb/mile	**SO_2** lb/mile	**PM_{10}** lb/mile	**$PM_{2.5}$** lb/mile	**CO_2** lb/mile	**VOC** lb	**CO** lb	**NOx** lb	**SO_2** lb	**PM_{10}** lb	**$PM_{2.5}$** lb	**CO_2** kg
Dump Truck (12 CY)	570	230	27	1.66E-03	8.58E-03	3.92E-02	0	1.69E-03	1.64E-03	3	25.54	132.04	603.60	0.28	26.02	25.27	23,612
										Subtotal (lbs):	**118.26**	**803.64**	**1,376.13**	**27.07**	**131.50**	**127.58**	
										Subtotal (kgs):							**85,394**

Table 2. Pavement Demolition - Alternative 1

22,802 SF 467 CY

				VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO_2 g/hp-hr	PM_{10} g/hp-hr	$PM_{2.5}$ g/hp-hr	CO_2 g/hp-hr	VOC lb	CO lb	NOx lb	SO_2 lb	PM_{10} lb	$PM_{2.5}$ lb	CO_2 kg
Crawler Dozer	55	125	0.58	0.34	1.21	4.08	0.12	0.23	0.22	535.79	3.02	10.61	35.87	1.01	1.99	1.93	2,136
air compressor	55	49	0.59	0.33	2.54	4.53	0.13	0.54	0.53	595.16	1.15	8.91	15.87	0.45	1.90	1.84	946
excavator	13	380	0.59	0.31	2.50	4.51	0.13	0.55	0.54	595.21	2.01	16.04	28.96	0.82	3.55	3.44	3,825
On-road Equipment	**Cumulative Hours**	**Engine HP**	**Speed (mph)**	**VOC** lb/mile	**CO** lb/mile	**NOx** lb/mile	**SO_2** lb/mile	**PM_{10}** lb/mile	**$PM_{2.5}$** lb/mile	**CO_2** lb/mile	**VOC** lb	**CO** lb	**NOx** lb	**SO_2** lb	**PM_{10}** lb	**$PM_{2.5}$** lb	**CO_2** kg
Dump Truck	43	230	27	1.66E-03	8.58E-03	3.92E-02	0	1.69E-03	1.64E-03	3	1.93	9.96	45.53	0.02	1.96	1.91	1,781
										Subtotal (lbs):	**8.10**	**35.57**	**80.70**	**2.28**	**7.43**	**7.21**	
										Subtotal (kgs):							**8,689**

Table 3. Site Prep for Alternative 1 170,628 CY excavation 52,165 SY grading

				VOC[1] g/hp-hr	CO[1] g/hp-hr	NOx[1] g/hp-hr	SO_2[1] g/hp-hr	PM10[1] g/hp-hr	PM2.5[1] g/hp-hr	CO_2[1] g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb	PM2.5 lb	CO_2 kg
Off-road Equipment	**Cumulative Hours**	**Engine HP**	**Load Factor**														
Excavator	569	243	0.59	0.34	1.21	4.03	0.12	0.22	0.22	536	61.85	217.48	724.70	20.73	40.07	38.87	43,708
Skid Steer Loader	683	160	0.23	0.38	1.47	4.34	0.12	0.31	0.30	536	21.24	81.45	240.40	6.38	16.92	16.41	13,464
Dozer (Rubber Tired)	618	145	0.59	0.38	1.41	4.17	0.12	0.30	0.29	536	43.90	164.85	486.46	13.43	34.50	33.46	28,322
Scraper Hauler Excavator	556	365	0.58	0.38	1.42	4.19	0.12	0.30	0.29	536	97.90	368.31	1,086.49	29.90	76.95	74.64	63,053
Grader	20	285	0.58	0.34	1.21	4.07	0.12	0.23	0.22	536	2.51	8.80	29.66	0.84	1.64	1.59	1,771
On-road Equipment	**Cumulative Hours**	**Engine HP**	**Speed (mph)**	**VOC** lb/mile	**CO** lb/mile	**NOx** lb/mile	**SO_2** lb/mile	**PM_{10}** lb/mile	**$PM_{2.5}$** lb/mile	**CO_2** lb/mile	**VOC** lb	**CO** lb	**NOx** lb	**SO2** lb	**PM** lb	**PM2.5** lb	**CO_2** kg
Dump Truck (12 CY)	2,713	230	16	1.66E-03	8.58E-03	3.92E-02	0	1.69E-03	1.64E-03	3	73.01	377.45	1,725.49	0.80	74.40	72.25	67,499
										Subtotal (lbs):	**300**	**1,218**	**4,293**	**72**	**244**	**237**	
										Subtotal (kgs):							**217,817**

Table 4. Gravel Work for Alternative 1

1,932 CY

Off-road Equipment	Cumulative Hours	Engine HP	Load Factor	VOC[1] g/hp-hr	CO[1] g/hp-hr	NOx[1] g/hp-hr	SO_2[1] g/hp-hr	PM10[1] g/hp-hr	PM2.5[1] g/hp-hr	CO_2[1] g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM10 lb	PM2.5 lb	CO_2 kg
Dozer	25	185	0.59	0.34	1.21	4.08	0.12	0.23	0.22	536	2.07	7.26	24.55	0.69	1.36	1.32	1,462
Wheel Loader for Spreading	32	87	0.59	0.35	1.25	4.23	0.12	0.24	0.23	536	1	5	15	0	1	1	880
Compactor	98	103	0.43	0.36	1.34	4.45	0.12	0.26	0.25	536	3	13	43	1	2	2	2,325
On-road Equipment	**Cumulative Hours**	**Engine HP**	**Speed (mph)**	**VOC[2] lb/mile**	**CO[2] lb/mile**	**NOx[2] lb/mile**	**SO_2[2] lb/mile**	**PM10[2] lb/mile**	**PM2.5[2] lb/mile**	**CO_2[2] lb/mile**	**VOC lb**	**CO lb**	**NOx lb**	**SO2 lb**	**PM10 lb**	**PM2.5 lb**	**CO_2 kg**
Dump Truck	326	230	26	1.66E-03	8.58E-03	3.92E-02	1.82E-05	1.69E-03	1.64E-03	3	14.07	72.72	332.43	0.15	14.33	13.92	13,004
										Subtotal (lbs):	**21**	**97**	**415**	**2**	**19**	**18**	
										Subtotal (kgs):							**17,672**

Table 5. Concrete Work for Alternative 1

Foundation Work 56,717 CY
Sidewalks, etc. 18 CY
Total 56,735 CY

Note: Assume all excavated soil is accounted for in Excavate/Fill and Trenching

Equipment	Cumulative Hours	Engine HP	Load Factor	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO_2 g/hp-hr	PM10 g/hp-hr	PM2.5 g/hp-hr	CO_2 g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb	PM2.5 lb	CO_2 kg
Concrete Mixer (3 to 1 truck)	3,019	3.5	0.43	0.69	3.04	6.17	0.13	0.54	0.52	588	6.89	30.49	61.82	1.27	5.41	5.25	2,673
Concrete Truck	2,730	300	0.43	0.38	1.75	6.18	0.11	0.27	0.26	530	294.70	1,355.41	4,800.07	88.50	208.62	202.36	186,612
										Subtotal (lbs):	**302**	**1,386**	**4,862**	**90**	**214**	**208**	
										Subtotal (kgs):							**189,285**

Table 6. Structure Construction- Alternative 1

191,405 SF new construction + renovation to bldgs 7 & 8

Equipment	Cumulative Hours	Engine HP	Load Factor	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO_2 g/hp-hr	PM10 g/hp-hr	PM2.5 g/hp-hr	CO_2 g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb	PM2.5 lb	CO_2 kg
Crane	957	330	0.58	0.25	1.22	5.26	0.11	0.21	0.20	530	99.22	492.46	2124.02	46.07	83.88	81.37	97,135
Concrete truck	957	300	0.43	0.19	1.45	4.32	0.12	0.21	0.20	536	51.06	395.88	1175.96	31.40	57.17	55.46	66,203
Diesel Generators	766	40	0.43	0.26	1.41	3.51	0.11	0.23	0.22	536	7.62	40.92	101.90	3.13	6.74	6.53	7,064
Telehandler	1,971	99	0.59	0.51	3.94	4.93	0.13	0.52	0.51	595	129.33	999.95	1251.03	32.46	132.27	128.30	68,456
Scissors Lift	2,297	83	0.59	0.51	3.94	4.93	0.13	0.52	0.51	595	126.33	976.79	1222.05	31.71	129.20	125.33	66,870
Skid steer loader	1,845	67	0.59	1.69	7.97	6.70	0.15	1.19	1.15	691	272.12	1281.13	1076.96	23.89	191.20	185.47	50,387
forklift	570	84	0.59	0.51	3.94	4.93	0.13	0.52	0.51	595	31.73	245.36	306.97	7.97	32.45	31.48	16,797

Table 6. Continued Structure Construction- Alternative 1

On-road Equipment	Cumulative Hours	Engine HP	Speed (mph)	VOC lb/mile	CO lb/mile	NOx lb/mile	SO_2 lb/mile	PM10 lb/mile	PM2.5 lb/mile	CO_2 lb/mile	VOC lb	CO lb	NOx lb	SO2 lb	PM lb	PM2.5 lb	CO_2 kg
Pickup Truck	1,230	400	30	0.00119	0.03467	0.00486	0.00001	0.00020	0.00018	0.40	43.73	1279.47	179.45	0.48	7.26	6.70	6,716
Delivery Truck	615	265	60	1.66E-03	8.58E-03	3.92E-02	0.00002	1.69E-03	1.64E-03	3	61.24	316.58	1447.23	0.67	62.40	60.60	56,614
										Subtotal (lbs):	**822.38**	**6028.54**	**8885.58**	**177.78**	**702.58**	**681.22**	
										Subtotal (kgs):							**436,242**

Table 7. Fugitive Dust Emissions for Alternative 1

Implementation Year	PM_{10} tons/acre/mo	acres	days of disturbance	PM_{10} Total	PM2.5/ PM_{10} Ratio	$PM_{2.5}$ Total
Year 1	0.42	3.35	240	16.9	0.1	1.7
Year 2	0.42	3.35	240	16.9	0.1	1.7
Year 3	0.42	3.35	120	8.5	0.1	0.8

Table 8. Total Construction Emissions for Alternative 1

Year	VOC Tons/yr	CO Tons/yr	NOx Tons/yr	SO_2 Tons/yr	PM10 Tons/yr	PM2.5 Tons/yr	CO_2 M Tons/yr
Year 1	0.3	1.9	4.0	0.1	17.2	1.9	208
Year 2	0.3	1.9	4.0	0.1	17.2	1.9	208
Year 3	0.2	1.0	2.0	0.0	8.6	1.0	104

Sources:

2010 National Estimator, Craftsman Book Company.

Ohio Emergency Management Agency. Appendix F Debris Estimating Guides; pg 2. http://ema.ohio.gov/Documents/DRB/Sample_Plan/APPENDIX_F.doc

EPA NONROAD2008a Model

MOVES (Motor Vehicle Emission Simulator) 2010

WRAP Fugitive Dust Handbook, WGA, 2006

Analysis of the Fine Fraction of Particulate Matter in Fugitive Dust, Final Report, WGA 2005

CONSTRUCTION DETAILS

Project Name	FootPrint (AC)	Clearing (AC)	Grading (sf)	Site Prep - Excavate/Fill (CY)	Building Construction - Total Size (sf)	Building Construction-foundation footprint (sf)	# Stories	Sidewalks (sf)	Gravel Work (CY)	Concrete Work - sidewalks, etc (CY)	Concrete Work - foundation (CY)
BEQ and support facilities (8 story)	2.07	0.00	14,513	16,411	116,101	14,513	8	1,451	538	18	15,856
Parking Garage	0.86	0.00	37,652	42,256	75,304	37,652	2	NA	1,395	NA	40,862
Bldg 8				111,960					592		592
TOTALS			**52,165**	**170,628**	**191,405**	**52,165**	**10**	**1,451**	**2,524**	**18**	**57,310**

	Location	SF	Stories	Demo Bldgs (SF)	Demo asphalt/ concrete (SF)
Demolition - Alternative 1	810 L Street SE	439	3	1,317	
	808 L Street SE	419	3	1,257	
	811 Virginia Ave SE	396	2	792	
	809 Virginia Ave SE	435	2	870	
	821 Virginia Ave SE	6059			6,059
	801 Virginia Ave SE	7648			7,648
	1100 8th St SE	2900	1	2,900	
	Potomac Ave SE	1245			1,245
	815 L St	1711	3	5,133	
	813 L St	73	1	73	
	817 L St	1043	2	2,086	
	L St	25			25
	Potomac Ave SE	1245			1,245
	819 L St	1687	2	3,374	
	1103 9th St SE	630			630
	819 L St	91			91
	Potomac Ave SE	1991			1,991
	811 L St	1550	1	1,550	
	816 Potomac Ave	6396	5	31,980	
	1105 9th St SE	630			630
	823-825 L St	964			964
	9th St SE	2274			2,274
	810-1120 Potomac Ave SE	8598	3	25,794	
	1102-1104 8th St SE	6306	2	12,612	
	TOTALS	**54,755**		**89,738**	**22,802**
		1.26		34,722	
				124,460	