

3.3 TRANSPORTATION, TRAFFIC, CIRCULATION, AND PARKING

This section describes the transportation network in the vicinity of the VA Transfer Parcel and summarizes the transportation impacts projected to result from implementation of the EA Alternatives. Aspects of the transportation system evaluated in this section include traffic operations, parking and loading needs, transit service, and pedestrian and bicycle safety and circulation. A detailed transportation impact analysis is included in Appendix D (Transportation Impact Study).

3.3.1 Regulatory Framework

There are no applicable Federal standards related to transportation and parking. The VA Transfer Parcel is located on Federal land owned by the Navy and that would be transferred to VA; thus, the proposed development is exempt from local planning regulations of the adjacent jurisdictions, which include the City of Alameda, Alameda County, and the City and County of San Francisco. Although the Proposed Action is not subject to the regulations of regional and local jurisdictions, relevant policies related to transportation, traffic, circulation, and parking are discussed below.

Alameda County Transportation Commission

As the Congestion Management Agency for Alameda County, the Alameda County Transportation Commission (ACTC) plans, funds, and delivers transportation programs and projects throughout Alameda County. The Alameda County Transportation Commission is also responsible for preparation of the Congestion Management Plan (CMP). The CMP is a plan that describes the policies and strategies to address congestion problems in the county. California legislation mandates that a biennial assessment of the CMP roadway network be conducted to assess level of service (LOS) and traffic volumes. The CMP roadway network consists of State routes and principal arterials within Alameda County. The *Congestion Management Plan 2011* (ACTC, 2011) identifies a level of service standard of E for facilities within the CMP network.

Alameda General Plan Element

The City of Alameda General Plan Transportation Element contains goals, objectives, and policies related to transportation and circulation with an emphasis on supporting the development of a multimodal transportation system.

Objective 4.1.1: Provide for the safe and efficient movement of people, goods, and services.

Policy 4.1.1.i: Design transportation facilities to accommodate current and anticipated transportation use.

Policy 4.1.1.o.2: Manage operations to maintain acceptable levels of LOS

- a. Develop and implement a strategy to increase the use of alternative modes of transportation by 10 percentage points by the year 2015.
- b. Reduce the percentage of Alameda traffic made up of single occupant vehicle trips (e.g. based on Census data, or do survey to establish baseline)

- c. Shift 10 % of peak hour trips to less congested times of day
- d. Collaborate with Alameda Unified School District (AUSD) to explore opportunities to reduce congestion during peak school times, for example staggering class times, encouraging parents to carpool, etc.

Objective 4.1.2: Protect and enhance the service level of the transportation system.

Objective 4.1.6: Increase the efficiency of the existing transportation system by emphasizing Transportation System Management (TSM) strategies and Transportation Demand Management (TDM) techniques.

Policy 4.1.6.a: Identify, develop, and implement travel demand management strategies to reduce demand on the existing transportation system.

1. Establish peak hour trip reduction goals for all new developments as follows:
 - 10 % peak hour trip reduction for new residential developments
 - 30 % peak hour trip reduction for new commercial developments.
2. Develop a Transportation Demand Management (TDM) toolbox that identifies a menu of specific TDM measures and their associated trip reduction percentages.
3. Develop a citywide infrastructure assessment using a Systems Engineering approach to determine capital investment needs.
4. Require implementation of ITS infrastructure as part of all new developments.

Policy 4.1.6.b: Identify locations where signal coordination could be employed to improve traffic flow and reduce vehicle emissions.

Objective 4.2.1: Design and maintain transportation facilities to be compatible with adjacent land uses.

Objective 4.2.5: Manage both on-street and off-street parking to support access and transportation objectives.

Objective 4.3.2: Enhance opportunities for pedestrian access and movement by developing, promoting, and maintaining pedestrian networks and environments.

Objective 4.3.5: Assess the impacts on all transportation modes (including auto, transit, bike and pedestrian) when considering mobility and transportation improvements.

Objective 4.4.2: Ensure that new development implements approved transportation plans, including the goals, objectives, and policies of the Transportation Element of the General Plan and provides the transportation improvements needed to accommodate that development and cumulative development.

Alameda Bike Master Plan Update

The Transportation Element addressed bicycling in a general sense, based on how it interacts with other transportation modes. Supplemental and specific policies are included in the Bike Master Plan Update that are applicable to the project:

Goal BP-2: Provide Additional End-of-Trip Facilities

e) Require major developers and businesses to monitor use of existing bicycle parking facilities in their properties and the immediate vicinity to help determine adequate needs for bicycle racks and lockers in the area.

Goal BP-5: Expand the Bicycle Network

a) Establish and maintain bikeways to priority destinations in Alameda, especially for travel to employment centers, commercial districts, transit stations and corridors, institutions, and recreational destinations.

3.3.2 Affected Environment

VA Transfer Parcel

The VA Transfer Parcel is located in the western half of the former NAS Alameda. The location and vicinity of the VA Transfer Parcel are illustrated in Figure 3.3-1. Roadways within the VA Transfer Parcel and the VA Development Area are not publicly accessible, and are old and deteriorating given the closure of NAS Alameda 15 years ago. Panoramic Drive, an unpaved roadway, enters the site north of its intersection with Avenue A.

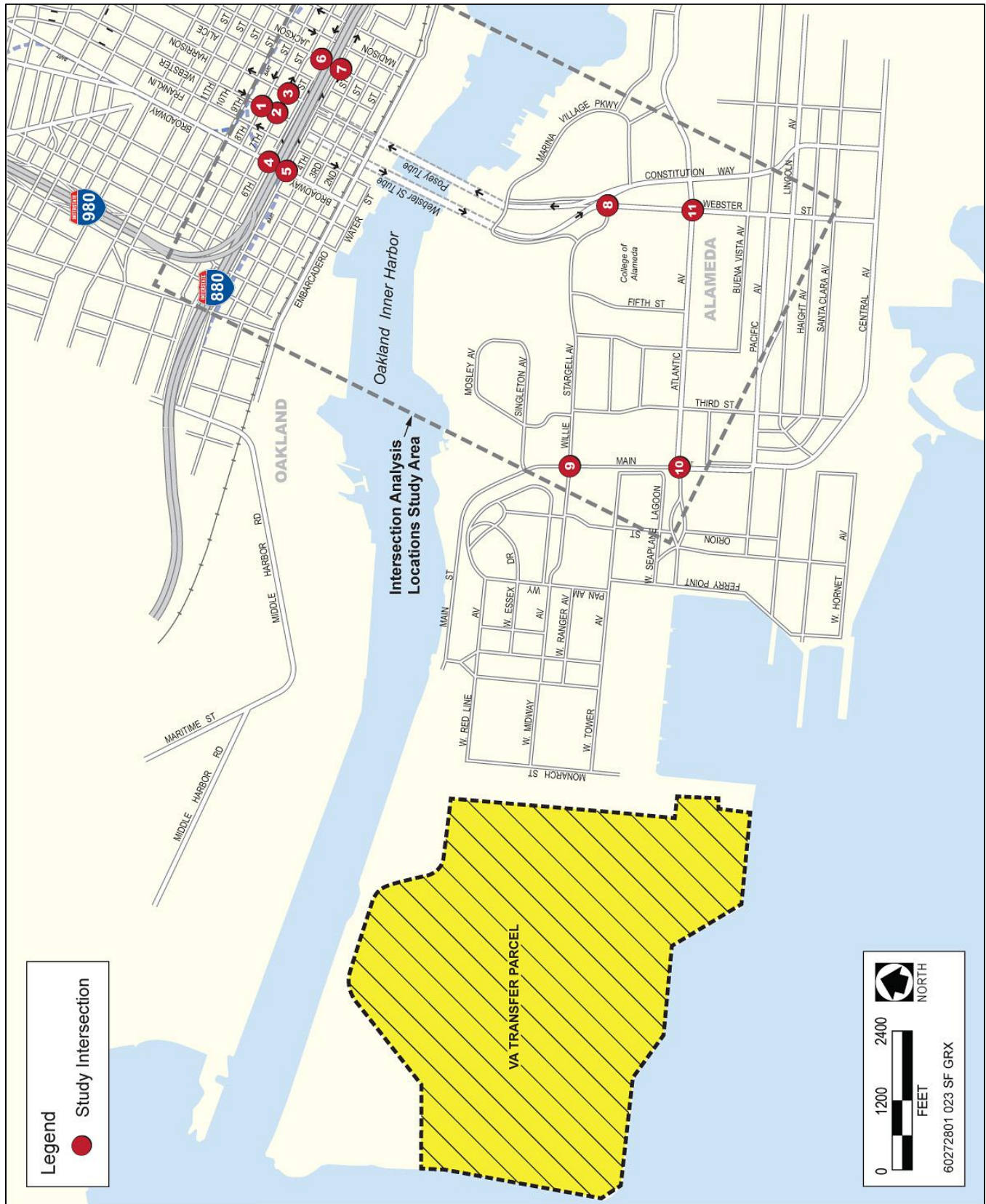
Surrounding Area

Regional Access

Regional access to and from the VA Transfer Parcel is provided by Interstate-880 (I-880), Interstate-980 (I-980), and the Webster Street Tube/Posey Tube (Figure 3.3-1).

- **I-880** provides access to the south and to the north, with connections to Interstate 80 and San Francisco via the Bay Bridge.
- **I-980** provides access to the northeast, connecting with Interstate 580 and State Route (SR) 24.
- **The Webster Street Tube/Posey Tube**, also known as SR-260 and SR-61,¹ are two parallel tunnels operating as a one-way couplet connecting the cities of Oakland and Alameda and running beneath the Oakland Inner Harbor. The Webster Street Tube serves southbound traffic into Alameda, while the Posey Tube operates in the northbound direction. The Webster Street Tube/Posey Tube is designated as part of the network for the ACTC's CMP.

¹ SR 260 and SR 61 share the same roadway alignment along the Webster Street and Posey Tube, which is why there are two State route designations for this couplet.



Source: AECOM, 2012

Figure 3.3-1:

Project Vicinity Map

Local Access

Local access to and from the VA Transfer Parcel is provided by the 11 major arterial streets described below.

- **Atlantic Avenue (Ralph Appezzato Memorial Parkway)** is an east-west arterial in Alameda that runs between Ferry Point and Triumph Drive. Atlantic Street is two lanes wide in each direction, with a curb and gutter along both sides of the roadway. Atlantic Avenue is designated as part of the ACTC CMP network between Webster Street and Main Street. The posted speed limit is 35 miles per hour (mph), or 25 mph in the school zone when children are present. Parking is prohibited along both sides of the roadway. The roadway primarily serves residential and institutional development.
- **Main Street** is a north-south local roadway that begins north of Pacific Avenue and extends north of Willie Stargell Avenue. Main Street is two lanes wide in each direction, with a curb, gutter, and sidewalk along both sides of the roadway between Pacific Avenue and Atlantic Avenue. The posted speed limit is 35 mph, and parking is prohibited along both sides of the roadway north of Atlantic Avenue. Main Street is designated as a roadway of regional significance within the Metropolitan Transportation Commission's (MTC's) Metropolitan Transportation System (MTS). The roadway primarily serves residential and institutional development.
- **Willie Stargell Avenue** is an east-west collector that runs between Main Street and Webster Street. Willie Stargell Avenue is one lane wide in each direction, with a curb and gutter along both sides of the roadway, and sidewalks are provided along the south side. Willie Stargell Avenue becomes West Midway Avenue west of Main Street. The posted speed limit is 25 mph, and parking is prohibited along both sides of the roadway. The roadway primarily serves residential and institutional development.
- **Jackson Street** is a north-south collector that runs between Lakeside Drive and First Street. Jackson Street is one lane wide in each direction, with a curb, gutter, and sidewalk along both sides of the roadway. Parking is allowed on both sides of the roadway. The roadway primarily serves residential development.
- **Harrison Street** is a north-south collector that runs between Monte Vista Avenue and 1st Street. Harrison Street is one-way northbound between 4th Street and 10th Street with three travel lanes and a curb, gutter, and sidewalk along both sides of the roadway. The posted speed limit is 25 mph, and parking is allowed on both sides of the roadway. Harrison Street operates as a one-way couplet, with Webster Street operating in the southbound direction and Harrison Street operating in the northbound direction. The roadway primarily serves retail development.
- **Webster Street** is a north-south arterial that begins at 51st Street in Oakland and continues south into Alameda. Webster Street operates as a one-way southbound roadway between the Webster Street Tube and Broadway in Oakland. In the project vicinity, Webster Street is two lanes wide in both directions, with a curb, gutter, and sidewalk along both sides of the roadway. The posted speed limit is 35 mph, and parking is provided on the west side of the roadway. Webster Street is designated as SR-260 and SR-61, and is part of the CMP roadway network, between the Webster Street Tube/Posey Tube and Central Avenue. The roadway primarily serves retail and residential development.
- **Broadway** is a major north-south arterial stretching from Jack London Square in the south to SR-24 in the north. In the vicinity of the Project, Broadway consists of two lanes in the northbound direction and two lanes in the southbound direction. Broadway is the primary north-south roadway in the downtown area.

- **5th Street** is an east-west collector that runs between Peralta Street and Oak Street in Oakland. The one-way eastbound 5th Street has one to three travel lanes and a curb, gutter, and sidewalk along the south side of the roadway. The posted speed limit is 25 mph, and parking is allowed on both sides of the roadway. As a one-way couplet, 5th Street operates in the eastbound direction, with 6th Street operating in the westbound direction. The 5th Street roadway primarily serves industrial development.
- **6th Street** is an east-west collector that runs between Fallon Street and Market Street. The one-way westbound 6th Street has two to three travel lanes and a curb, gutter, and sidewalk along the north side of the roadway. The posted speed limit is 25 mph, and parking is allowed on both sides of the roadway. As a one-way couplet, 6th Street operates in the westbound direction, with 5th Street operating in the eastbound direction. The 6th Street roadway primarily serves retail and residential development.
- **7th Street** is an east-west arterial that runs between Fallon Street and Navy Roadway, where 7th Street becomes Middle Harbor Road. The one-way eastbound 7th Street is located between Fallon Street and Castro Street with four travel lanes and a curb, gutter, and sidewalk long both sides of the roadway. As a one-way couplet, 7th Street operates in the eastbound direction, with 8th Street operating in the westbound direction. The 7th Street roadway primarily serves retail and residential development and has a posted speed limit of 25 mph.
- **8th Street** is an east-west arterial that runs between Fallon Street and Castro Street. The one-way westbound 8th Street has four travel lanes and a curb, gutter, and sidewalk along both sides of the roadway. As a one-way couplet, 8th Street operates in the westbound direction, with 7th Street operating in the eastbound direction. The 8th Street roadway primarily serves retail and residential development and has a posted speed limit of 25 mph.

Existing Traffic Conditions

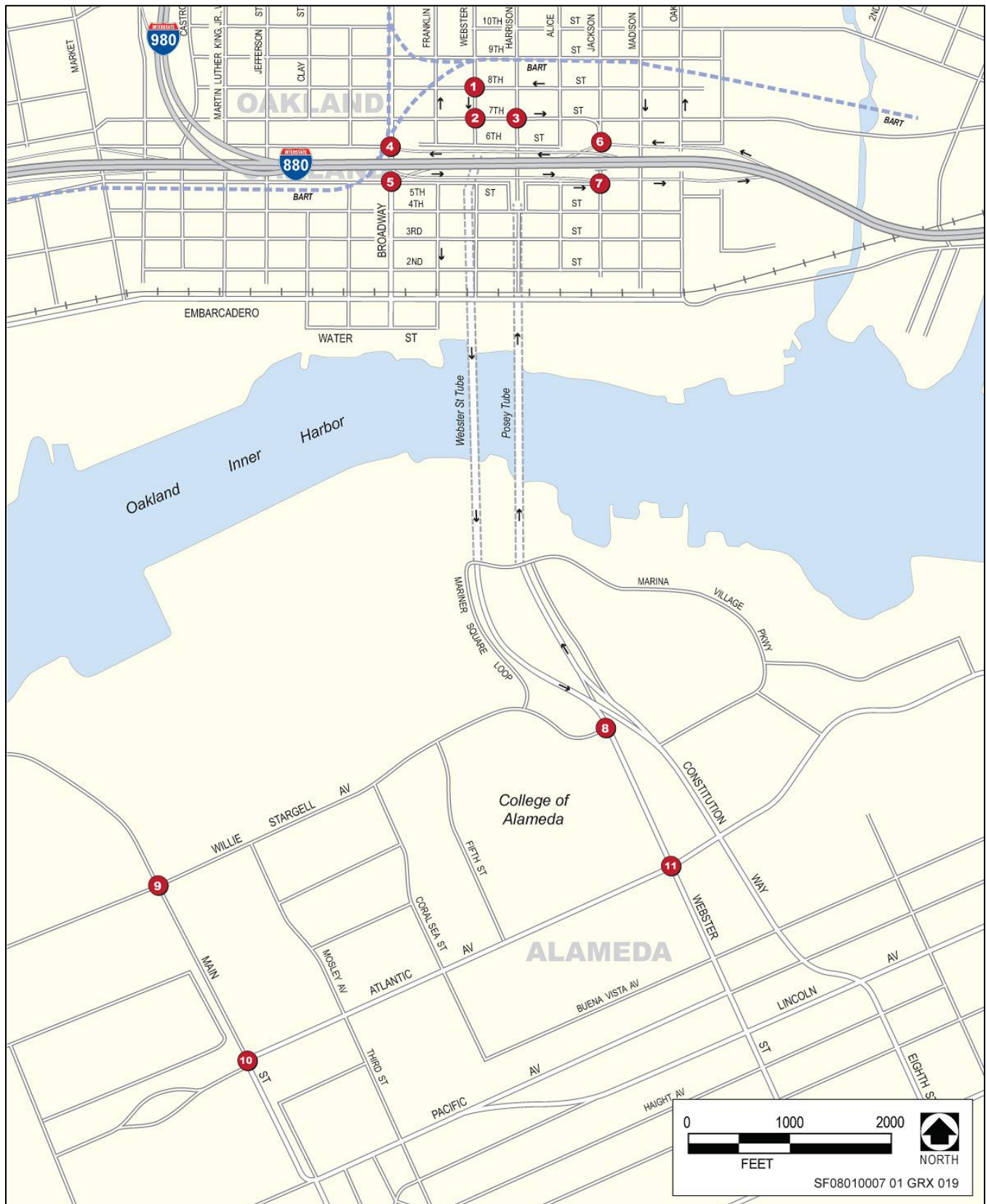
VA Transfer Parcel

Because the public does not have site access, the only traffic on the VA Transfer Parcel is generated by Navy-authorized vehicles providing conservation management services for the existing California Least Tern Colony or assisting ongoing remediation activities.

Surrounding Area (Study Intersections and Existing LOS)

Eleven intersections in Alameda and downtown Oakland were selected for study (see Figure 3.3-2) because these intersections would most likely be affected by the Proposed Action. Traffic counts for these 11 intersections were collected on Wednesday, November 16, 2011, and Saturday, December 3, 2011. Four of the study intersections are in the City of Alameda and the other seven are in City of Oakland. The existing traffic volumes in the vicinity of the VA Transfer Parcel were determined by collecting weekday A.M. and P.M. peak-period turning movement counts (between 7 A.M. and 9 A.M. and between 4 A.M. and 6 P.M.) and Saturday peak-period turning movement counts (between 10 A.M. and noon) at the study intersections. The traffic count data are presented in Appendix D (Transportation Impact Study) to this EA.

The LOS definitions for signalized intersections as presented in the 2000 *Highway Capacity Manual* (HCM) are described below. All study intersections are signalized; as such, the LOS definitions for unsignalized intersections are not presented. The LOS is based on average delay (in seconds per vehicle) for the various movements within an intersection. A combined weighted-average delay and an LOS are identified for an intersection. LOS is a



Source: AECOM, 2012

Figure 3.3-2:

Intersection Analysis Locations in the Study Area

qualitative indication of the level of delay and congestion experienced by motorists. LOS is designated by the letters A through F, with A corresponding to the lowest level of congestion and F corresponding to the highest level of congestion.

The City of Alameda considers an intersection to be operating acceptably at LOS D or better, while the City of Oakland considers an intersection to be operating acceptably at LOS E or better if it is located in the downtown area of Oakland. LOS for signalized intersections are defined in Table 3.3-1. In addition, the CMP legislation requires a LOS standard of LOS E for all CMP roadways. All study roadways are operating at LOS E or better, and therefore currently operate at acceptable levels.

Table 3.3-1: Level-of-Service Definitions for Signalized Intersections

LOS	Description	Average Delay (seconds/vehicle)
A	Little or no delay	< 10.0
B	Short traffic delay	> 10.0 and < 20.0
C	Average traffic delay	> 20.0 and < 35.0
D	Long traffic delay	> 35.0 and < 55.0
E	Very long traffic delay	> 55.0 and < 80.0
F	Extreme traffic delay	> 80.0

Notes: Delay in seconds per vehicle.

For signalized intersections, average delay represents the average of all approaches.

Source: TRB, 2000

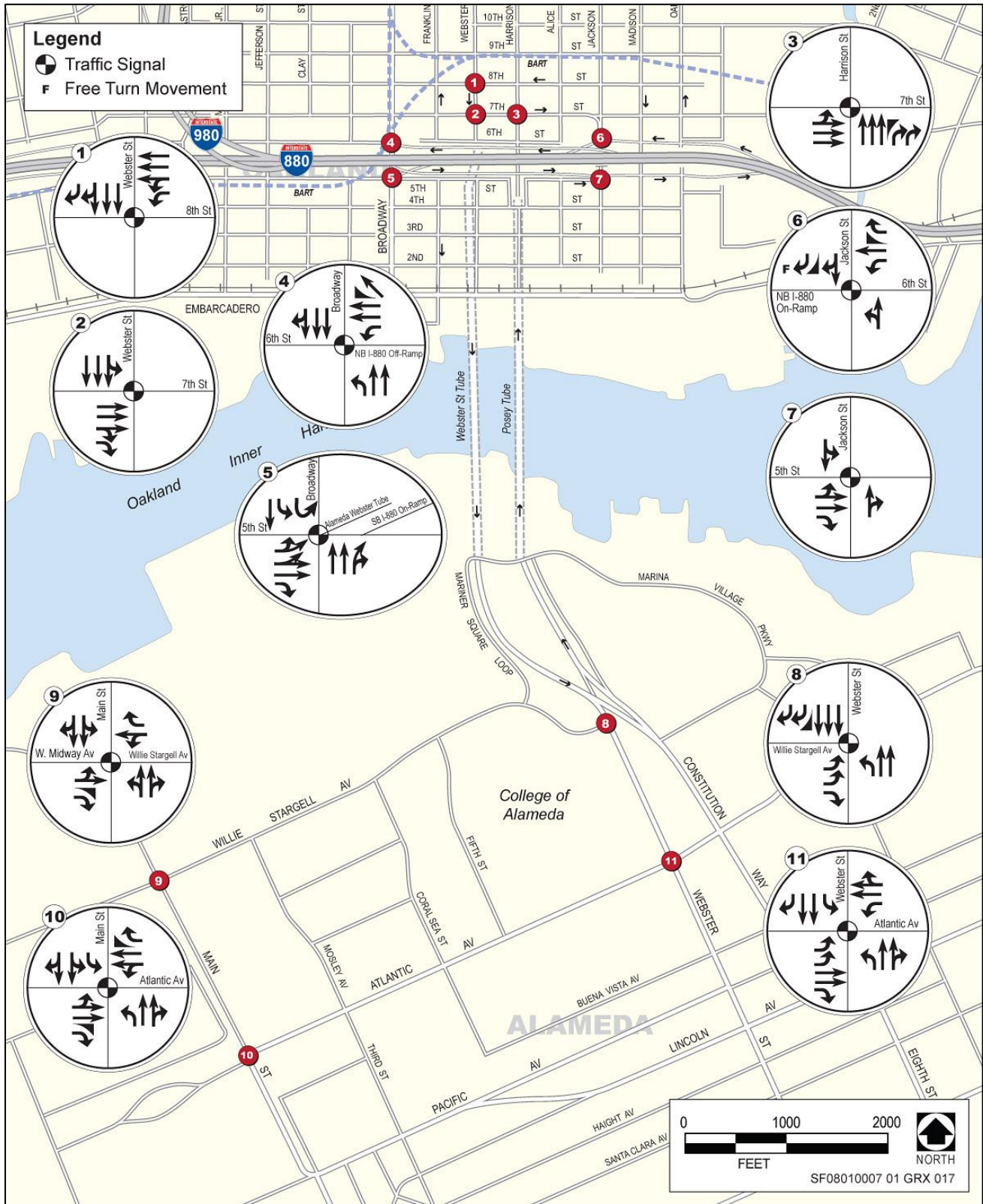
Table 3.3-3 presents the LOS summary of the study intersections under existing (2011) conditions. Lane geometries² for each study intersection are shown in Figure 3.3-3. The existing (2011) weekday A.M. and P.M. peak-hour volumes and Saturday peak-trip volumes of these intersections are presented in Figure 3.3-4. All the study intersections are operating at an acceptable LOS D or better during the weekday A.M. and P.M. peak hours and Saturday peak hour, as defined by the LOS standards of the Cities of Alameda and Oakland. Detailed LOS calculations are provided in Appendix D (Transportation Impact Study).

Table 3.3-2: Level-of-Service Definitions for Roadway Segments

LOS	Volume-to-Capacity Ratio	Description
A	0.00 to 0.60	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.
B	0.61 to 0.70	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.
C	0.71 to 0.80	Stable flow, but the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
D	0.81 to 0.90	Represents high-density, stable flow.
E	0.91 to 1.00	Represents operating conditions at or near the capacity level.
F	>1.00	Represents forced or breakdown flow.

LOS = level of service Source: TRB, 1985

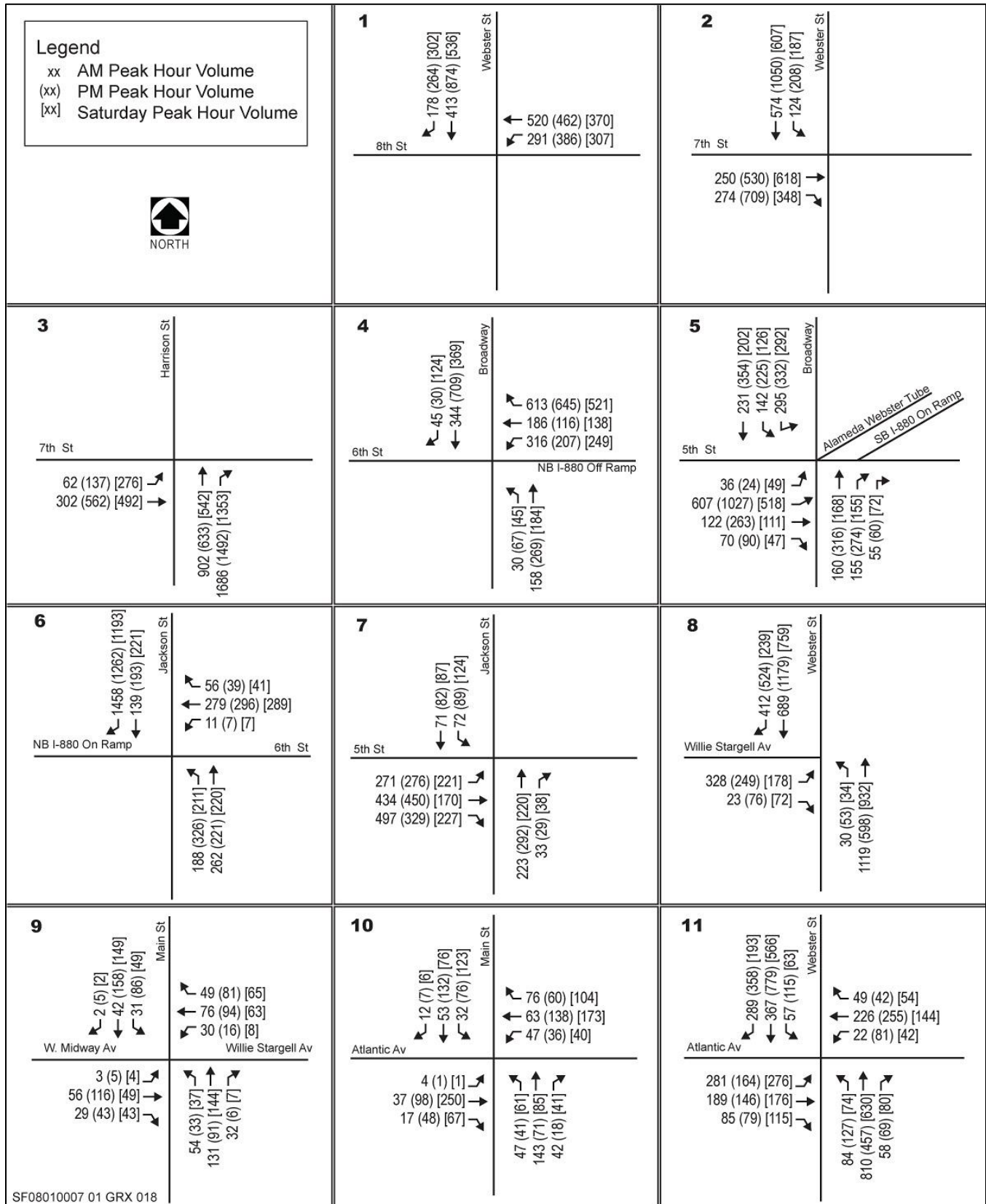
² The lane geometry is the lane configuration at each approach of an intersection (e.g., left-turn lane, through lane, and right-turn lane).



Source: AECOM 2012

Figure 3.3-3:

Lane Geometry of Study Intersections



Source: AECOM 2012

Figure 3.3-4: Existing (2011) Traffic Volumes at Study Intersections

Roadway Segments

Operations of the roadway segments were assessed using a volume-to-capacity (V/C) ratio methodology. For freeway segments, a per-lane capacity of 2,000 vehicles per hour was used, consistent with ACTC's 2011 CMP document. Levels of service for roadway segments are defined in Table 3.3-2.

The existing traffic volumes for roadway segments were collected from the Performance Measurement System Web site operated by the California Department of Transportation (Caltrans). The roadway segment volumes on I-880 were collected for the A.M. and P.M. peak hours during a Wednesday for the peak month of travel in 2011. In addition, weekday roadway volumes for the Webster Street Tube/Posey Tube for 2010 were collected from City of Alameda Department of Public Works staff members. The data from the Performance Measurement System was used to determine the peak month of travel for 2010, and the volumes collected for the Webster Street Tube/Posey Tube from the City of Alameda were adjusted to reflect volumes to be associated with the peak month of travel.

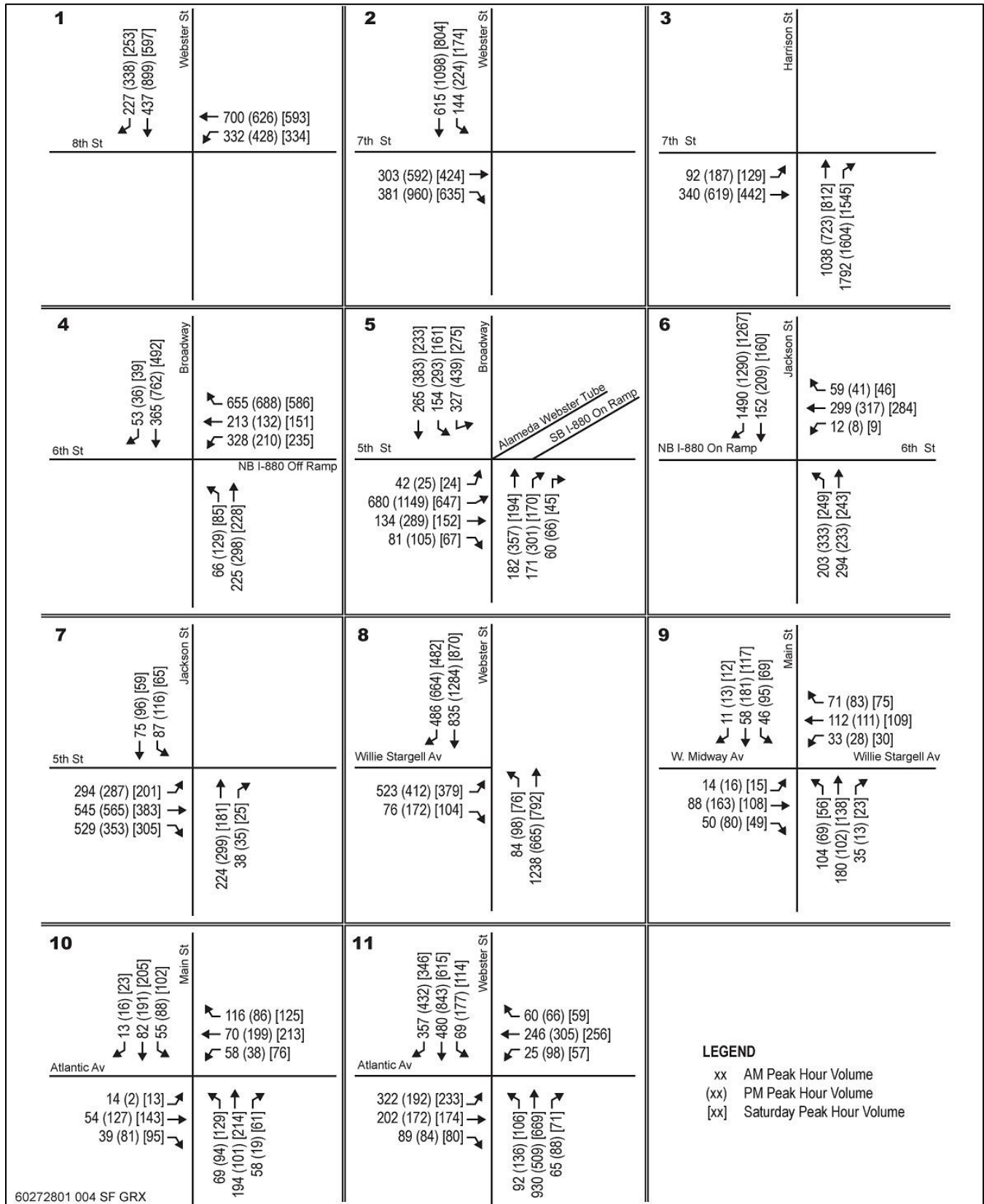
2017 Background Traffic Conditions

The Year 2017 background traffic conditions for LOS and roadway segments are presented, because 2017 represents the start of service of the proposed VHA OPC, VBA Outreach Office, and the first phase of the proposed NCA National Cemetery. The 2017 background traffic conditions include planned and approved developments, such as the Navy Environmental Restoration Program activities at Alameda Point, and transportation network changes in the study area illustrated in Figure 3.3-1. Some aspects of the Environmental Restoration Program activities were assumed would occur simultaneously with construction activities for Phase I of the Proposed Action. VA would coordinate with the Navy in order to ensure that the one-way peak hour and peak month trips accessing Alameda Point would not exceed 78 and 935 truck trips, respectively. In addition to traffic from known development projects, background traffic growth from throughout Alameda County has been estimated as described below.

Background traffic volumes for the 11 study intersections and ten roadway segments in 2017 were determined by applying growth factors to existing (2011) traffic volumes. Specifically, the future volumes for the four study intersections in Alameda were derived from the City of Alameda's travel demand model, and future volumes for the seven study intersections in Oakland were derived from the ACTC travel demand model. The ACTC and Alameda travel demand models include assumptions by the City of Alameda for NAS base redevelopment based on the NAS Alameda Community Reuse Plan from 1996. The weekday a.m. and p.m. peak-hour volumes and Saturday peak-hour volumes for the study intersections in 2017 are shown in Figure 3.3-5.

Table 3.3-3 presents the LOS summary for the study intersections under 2017 background traffic conditions. As shown in Table 3.3-3, all study intersections are projected to operate at acceptable levels (LOS D or better in Alameda and LOS E or better in downtown Oakland). Detailed LOS calculations are provided in Appendix D (Transportation Impact Study). The LOS remains unchanged between 2011 existing conditions and future 2017 conditions for four of the study intersections. By contrast, the following intersections would experience a decrease in LOS between 2011 and 2017 conditions:

- 7th Street/Harrison Street from LOS C to LOS D during the weekday P.M. peak hour;
- Broadway/6th Street from LOS B to LOS C during the weekday P.M. peak hour;
- Broadway/5th Street from LOS D to LOS E during the P.M. peak hour;



Source: AECOM 2012

Figure 3.3-5: Background (2017) Traffic Volumes at Study Intersections

Table 3.3-3: Intersection Levels of Service—Existing (2011) and 2017 Conditions

	Intersection	Peak Hour ¹	Existing (2011) Conditions		Near-Term (2017) Conditions	
			LOS	Delay ²	LOS	Delay ²
1	8th Street/Webster Street	Weekday A.M.	C	24.7	C	25.7
		Weekday P.M.	C	26.3	C	27.4
		Saturday	C	24.5	C	25.5
2	7th Street/Webster Street	Weekday A.M.	B	11.6	B	11.8
		Weekday P.M.	B	16.3	B	17.7
		Saturday	A	8.4	A	9.6
3	7th Street/Harrison Street	Weekday A.M.	B	15.3	B	16.2
		Weekday P.M.	C	25.9	D	45.2
		Saturday	B	11.6	B	13.2
4	Broadway/6th Street	Weekday A.M.	B	16.2	B	17.7
		Weekday P.M.	B	18.5	C	21.1
		Saturday	B	16.1	B	17.7
5	Broadway/5th Street	Weekday A.M.	C	30.7	C	33.7
		Weekday P.M.	D	52.4	E	76.4
		Saturday	C	27.0	C	28.2
6	Jackson Street/6th Street	Weekday A.M.	A	7.3	A	8.1
		Weekday P.M.	A	9.3	B	10.1
		Saturday	B	10.6	B	13.4
7	Jackson Street/5th Street	Weekday A.M.	B	18.0	C	31.8
		Weekday P.M.	B	14.0	B	15.2
		Saturday	B	11.8	B	13.5
8	Willie Stargell Avenue/Webster Street	Weekday A.M.	B	12.5	B	16.6
		Weekday P.M.	B	12.5	B	14.9
		Saturday	A	9.4	B	12.2
9	Willie Stargell Avenue/Main Street	Weekday A.M.	A	4.8	A	5.6
		Weekday P.M.	A	5.3	A	5.9
		Saturday	A	4.5	A	5.3
10	Atlantic Avenue/Main Street	Weekday A.M.	B	11.1	B	12.8
		Weekday P.M.	B	11.8	B	14.7
		Saturday	B	12.1	B	15.8
11	Atlantic Avenue/Webster Street	Weekday A.M.	C	29.9	D	44.7
		Weekday P.M.	C	24.7	C	26.7
		Saturday	C	21.0	C	23.7

Notes:

Bold indicates intersection operating at unacceptable levels (LOS F in downtown Oakland and LOS E or F in Alameda).

¹ “Saturday” indicates Saturday peak-trip-generation hour of the project.

² Delay presented in seconds per vehicle.

Source: AECOM, 2012

- Jackson Street/6th Street from LOS A to LOS B during the weekday P.M. peak hour;
- Jackson Street/5th Street from LOS B to LOS C during the weekday A.M. peak hour;
- Willie Stargell Avenue/Webster Street from LOS A to LOS B during the Saturday peak hour; and
- Atlantic Avenue/Webster Street from LOS C to LOS D during the weekday A.M. peak hour.

Despite these decreases in LOS, these seven intersections would still operate acceptably, as noted previously.

Table 3.3-4 presents the LOS summary for the 10 roadway segments under 2017 background traffic conditions. As shown, all roadway segments are projected to operate at acceptable levels as indicated by the City of Oakland’s criteria.

Table 3.3-4: Roadway Segment Levels of Service—Existing (2011) and Near-Term (2017) Conditions

Roadway Segment	Existing (2011) Conditions						2017 Conditions					
	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS
Northbound												
SR 260 Posey Tube	3,161	0.79	C	2,392	0.60	A	3,240	0.81	D	2,452	0.61	B
I-880 between 6th Street and I-980	3,580	0.36	A	4,285	0.43	A	3,766	0.38	A	4,507	0.45	A
I-880 between I-980 and 5th Street	1,943	0.24	A	2,648	0.33	A	2,015	0.25	A	2,746	0.34	A
I-880 between 5th Street and Union Street	4,901	0.82	D	4,712	0.79	C	5,063	0.84	D	4,868	0.81	D
I-880 between Union Street and 7th Street	3,866	0.48	A	3,802	0.48	A	4,004	0.50	A	3,938	0.49	A
I-880 between Embarcadero and 22nd Avenue	3,302	0.55	A	3,515	0.59	A	3,393	0.57	A	3,612	0.60	B
Southbound												
SR 260 Webster Street Tube	1,985	0.50	A	3,231	0.81	D	2,034	0.51	A	3,312	0.83	D
I-880 between 7th Street and Union Street	3,422	0.43	A	3,564	0.45	A	3,604	0.45	A	3,753	0.47	A
I-880 between 5th Street and 10th Avenue	3,818	0.48	A	3,491	0.44	A	3,940	0.49	A	3,602	0.45	A
I-880 between 10th Avenue and Embarcadero	3,221	0.54	A	3,135	0.52	A	3,321	0.55	A	3,233	0.54	A

Notes:

I-880 = Interstate 880; I-980 = Interstate 980; SR = State Route; V/C ratio = volume-to-capacity ratio

Bold indicates a roadway segment operating at an unacceptable level (i.e., LOS F)

Source: AECOM, 2012

Transit

VA Transfer Parcel

No transit service currently accesses the VA Transfer Parcel.

Surrounding Area

The primary transit service in the surrounding area is provided by Alameda–Contra Costa Transit District (AC Transit). AC Transit provides local and regional bus service within Alameda and Contra Costa Counties and between the East Bay and the San Francisco Transbay Terminal. The AC Transit bus routes are summarized in Table 3.3-5 by bus line, frequency, and nearest stop.

Table 3.3-5: AC Transit Service in the Project Vicinity

Line	Route	Frequency (minutes)		Nearest Stop to the VA Transfer Parcel (miles)
		A.M. Peak	P.M. Peak	
31	Alameda Point to MacArthur BART via Midway Avenue (Local)	30 minutes	30 minutes	Saratoga Street and W Midway (1.0 mile)
51A	Rockridge BART to Fruitvale BART (Local)	10 minutes	10 minutes	Webster Street and Atlantic Avenue (3.0 miles)
20	Diamond District to Downtown Oakland (Local)	30 minutes	30 minutes	Webster Street and Atlantic Avenue (3.0 miles)
O	Fruitvale BART to Transbay Temporary Terminal (Transbay)	30 minutes	10–20 minutes	Webster Street and Atlantic Avenue (3.0 miles)
W	Broadway and Blanding Avenue to Transbay Temporary Terminal (Transbay)	20 minutes (Westbound only)	20 minutes (Eastbound only)	Webster Street and Atlantic Avenue (3.0 miles)

Notes:

AC Transit = Alameda–Contra Costa Transit District; BART = Bay Area Rapid Transit; VA = Department of Veterans Affairs.

Source: Data provided by AC Transit in 2012

Line 851 provides overnight service between downtown Berkeley and the Fruitvale Bay Area Rapid Transit (BART) station. Buses operate every 60 minutes between midnight and 4 A.M. The nearest stop to the VA Transfer Parcel is located approximately 3 miles away at Webster Street and Atlantic Avenue.

The City of Alameda operates two free shuttles: the City of Alameda Paratransit Shuttle for Alameda and the Estuary Crossing Shuttle. The City of Alameda Paratransit Shuttle, which serves Alameda seniors 55 years and older and individuals with disabilities, makes runs every 60 minutes between 9 A.M. and 3 P.M. on Tuesday, Wednesday, and Thursday. The West Loop route operates on Tuesdays and the nearest stop to the VA Transfer Parcel is located approximately 1.5 miles away at West Midway Avenue and Orion Street. The Estuary Crossing Shuttle between Alameda’s west end and the Lake Merritt BART station makes runs every weekday between the Lake Merritt BART station and two stops near the College of Alameda every 30 minutes between 7 A.M. and 11:30 A.M. and between 3:30 P.M. and 7 P.M. The shuttle seats 18 passengers and can carry 13 bicycles.

Additionally, VA owns and operates two 12-passenger shuttles and one 6-passenger van. The two 12-passenger vans currently provide shuttle service between the Oakland OPC and Martinez OPC (four trips per day) and

between the Oakland OPC and the San Francisco VA Medical Center (two trips per day). The 6-passenger van currently provides local trips between the Oakland OPC and Behavioral Health Clinic, both located in Oakland. The transportation is provided free of charge to accommodate Veterans with scheduled appointments. Veterans must make reservations in advance to schedule shuttle service. Once the proposed OPC at Alameda Point is operational, VA's Oakland OPC and Oakland Behavioral Health Clinic would be closed. This shuttle service would be rerouted to serve the VA Development Area and is expected to continue operation between the project site and Martinez and San Francisco.

BART provides local and regional rail service throughout the Bay Area. At approximately 4.5 miles away, the Lake Merritt BART station is the closest station to the Alameda Point area and can be accessed via bus or shuttle. AC Transit bus lines 11, 62, 88, and 611 all have bus stops at the Lake Merritt station. The City of Alameda's Oakland Inner Harbor Crossing Shuttle also has a stop at the Lake Merritt station. Three BART lines serve the Lake Merritt station (Richmond to Fremont, Daly City to Fremont, and Daly City to Dublin/Pleasanton). Service to and from the Lake Merritt BART station generally operates every 15 minutes or less during weekday peak periods.

The Alameda/Oakland Ferry is a public-transit ferry service connecting the cities of Alameda and Oakland to San Francisco across San Francisco Bay. The City of Alameda and Port of Oakland contract with the privately run Blue & Gold Fleet to provide the service. The Alameda (Main Street) ferry terminal is located at 2990 Main Street, approximately 1 mile from the VA Transfer Parcel. Ferries run between Alameda/Oakland and San Francisco approximately every 60 minutes between 6 A.M. and 9 P.M. on weekdays. Every ferry ticket comes with an attached AC Transit bus transfer, allowing ferry riders free AC Transit connections to and from the Alameda (Main Street) or Clay Street (Jack London Square) ferry terminals. An additional charge is required for AC Express buses.³

Pedestrian

VA Transfer Parcel

Access to the VA Transfer Parcel is currently restricted, and no formal pedestrian facilities (i.e., improved sidewalks) exist on the property.

Surrounding Area

All major streets in the surrounding area have sidewalks, and all major intersections have marked crosswalks. Generally, little pedestrian activity was observed in the area immediately adjacent to the VA Transfer Parcel (i.e., Alameda Point area) during the weekday and weekend peak periods. During these peak periods, nearby sidewalk and crosswalks were observed to be operating at free-flow conditions, with pedestrians moving at normal walking speeds and with freedom to bypass other pedestrians.

³ Express buses operate more frequently during peak commute times and have fewer stops along routes than traditional buses.

Bicycle

Caltrans's *Highway Design Manual* defines three types of bikeways:

- *Class I bicycle facilities (bike paths)* provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross-flow minimized. Examples include shoreline bike paths, abandoned railroad rights-of-way, or paths within parks.
- *Class II bicycle facilities (bike lanes)* provide a striped lane for one-way bicycle travel on a street or highway, adjacent to the curb lane.
- *Class III bicycle facilities (bike routes)* provide for shared use with pedestrian or motor vehicle traffic. Bike routes are typically used to provide continuity to other bicycle facilities (usually bike lanes), or to designate preferred routes through high-demand corridors.

VA Transfer Parcel

Access to the VA Transfer Parcel is currently limited, and no formal bicycle facilities or lanes exist on the property.

Surrounding Area

Several bicycle facilities are provided or planned for implementation in the area immediately adjacent to the VA Transfer Parcel (i.e., Alameda Point area), as identified in the *City of Alameda Bicycle Plan Update* (Alameda, 2010). The existing bicycle facilities in the vicinity of the VA Transfer Parcel are as follows:

- Class I bicycle paths:
 - Main Street (east side), between Ralph Appezato Memorial Parkway and Singleton Avenue;
 - Main Street (west side), between the Main Street ferry terminal and north of the Lincoln Avenue/Central Avenue intersection;
 - Willie Stargell Avenue, between Mariner Square Loop and Webster Street; and
 - Constitution Way, between Marina Village Parkway and south of Atlantic Avenue.
- Class II bicycle lanes:
 - Atlantic Avenue, between Constitution Way and Eagle Avenue;
 - Marina Village Parkway, between Mariner Square Drive and Constitution Way;
 - Willie Stargell Avenue, between 5th Street and Mariner Square Loop; and
 - 5th Street, between Ralph Appezato Memorial Parkway and Willie Stargell Avenue.
- Class III bicycle route:
 - Willie Stargell Avenue, between Main Street and Mariner Square Loop.

The *City of Alameda Bicycle Plan Update* also identifies several planned bicycle facilities in the vicinity of the VA Transfer Parcel:

- Extension of the bicycle lanes on Ralph Appezzato Memorial Parkway and Willie Stargell Avenue;
- Extension of the Alameda Point and Main Street Bay Trail segments;
- Extension of the bicycle route on Pacific Avenue;
- Addition of a Class III bicycle route on 3rd Street, between Ralph Appezzato Memorial Parkway and Central Avenue; and
- Development of bicycle lanes along major streets within the Alameda Point area.

Bicyclists are allowed to use the Oakland Inner Harbor Crossing Shuttle, which operates every weekday between the Lake Merritt BART station and two stops near the College of Alameda. The shuttle runs every 30 minutes between 7 A.M. and 11:30 A.M. and between 3:30 P.M. and 7 P.M. The shuttle seats 18 passengers and can carry 13 bicycles. All AC Transit buses have front-mounted racks that can accommodate two bicycles at a time. Bicycles are permitted on BART trains except as indicated on the BART schedule during weekday-commute peak hours. All ferries are equipped with racks where bicycles can be parked for the duration of the trip.

The *City of Oakland Bicycle Plan Update* (Oakland, 2007) identifies several existing and planned bicycle facilities. The existing bicycle facilities in the vicinity of the VA Transfer Parcel are as follows:

- Class I bicycle paths:
 - Posey Tube/Harrison Street (northbound), between 6th Street and Constitution Way; and
 - Jack London Square Waterfront and Lake Merritt Trail, between the ferry terminal and 1st Street/Embarcadero.
- Class II bicycle lanes:
 - 8th Street, between Jefferson Street and Broadway; and
 - Broadway, between 25th Street and Interstate-580.
- Class III bicycle routes:
 - Broadway, between 2nd Street and 25th Street;
 - 2nd Street, between Oak Street and Brush Street; and
 - Washington Street, between 2nd Street and 10th Street.

The following bikeway projects are under development in the vicinity of the VA Transfer Parcel:

- Broadway Corridor bicycle lane;
- 10th Street (Oak Street to 5th Avenue) bicycle lane;
- Harrison Street/Oakland Avenue Bicycle Lane and Route Project; and
- East 7th Street Bikeway Improvement Project.

Parking and Loading

VA Transfer Parcel

There are no designated parking or loading facilities on the VA Transfer Parcel.

Surrounding Area

In general, on-street parking in the surrounding area consists of time-limited parallel parking. Existing on-street parking conditions were qualitatively assessed through field observations conducted during weekday peak periods. Based on the field observations, it was determined that on-street parking is generally well utilized throughout the day, although particular occupancy percentages can vary depending on location and peak period.

3.3.3 Environmental Consequences

Assessment Methods

Overview of Assessment

The following scenarios were evaluated to identify the potential transportation impacts of the Proposed Action:

- Existing (2011) Conditions.
- After Completion of Initial Construction—2017:
 - No Action;
 - Plus Project Alternative 1; and
 - Plus Project Alternative 2.
- Cumulative Conditions—2035:
 - No Action;
 - Plus Project Alternative 1 (Including subsequent cemetery construction); and
 - Plus Project Alternative 2 (Including subsequent cemetery construction).

Existing (2011) Conditions were analyzed to describe the current conditions in Year 2011. Initial facility (2017) conditions were analyzed to describe conditions when the first phase of construction (i.e., VHA OPC, VBA Outreach Office, Conservation and Management Office, NCA Cemetery [Phase 1], and associated infrastructure) would be complete. The trip generation for the subsequent cemetery expansion was calculated, but no quantitative analysis was conducted for this scenario. The trip generation for the cemetery expansion was needed because each subsequent phase after initial construction would generate the same number of trips. Year 2035 was chosen for analysis because this is the forecast year for the regional travel demand model.

A conservative analysis was completed for Cumulative (2035) Plus Project Alternative Conditions. All trips generated for the complete Proposed Action were added to Cumulative (2035) No Project Conditions, even though the NCA Cemetery would not be fully built out until Year 2116. In addition, this approach for Cumulative Conditions was used to be consistent with other VA documents for cemeteries. See Section 4.0 (Cumulative Impacts) for a discussion of forecast Year 2035.

Intersections

Existing and 2017 overall peak-hour traffic conditions were evaluated at the intersections that would most likely be affected by the EA Alternatives. The assessment methodology consists of estimating travel demand associated with the EA Alternatives and then adding the vehicle trips to the future background conditions in 2017. Next, LOS calculations were performed and compared to the standards of the Cities of Alameda and Oakland. See below for details on the travel demand forecasts.

Transit

Impacts on transit operations and facilities as a result of trips related to the Proposed Action were assessed by comparing the projected transit ridership against the available capacity on transit operators providing access to the surrounding area.

Roadway Segments

Existing and 2017 peak-hour traffic conditions were evaluated only at the regional roadway segments that would generate trips on the CMP network or the MTS. The CMP network is a designated roadway system that includes all interstate highways, State routes, and portions of the street and roadway system operated and maintained by the local jurisdictions. The MTS is a broader designated system that includes the entire CMP network and transit services, rail, maritime ports, airports, and transfer hubs. The entire MTS and the CMP network are defined in the ACTC's CMP. The following roadway segments were selected for analysis:

- 1) SR 260 (Posey Tube) south of I-880;
- 2) SR 260 (Webster Street Tube) south of I-880;
- 3) I-880 between 7th Street and Union Street;
- 4) I-880 between 5th Street and 10th Avenue;
- 5) I-880 between 10th Avenue and Embarcadero ;
- 6) I-880 between 6th Street and I-980;
- 7) I-880 between I-980 and 5th Street;
- 8) I-880 between 5th Street and Union Street; and
- 9) I-880 between Embarcadero and 22nd Avenue.

Traffic conditions at the roadway segments were analyzed during the weekday a.m. and p.m. peak traffic hours. The weekday A.M. peak period is typically between 7 A.M. and 9 A.M., while the weekday p.m. peak period is typically between 4 P.M. and 6 P.M. The Saturday peak traffic period was not analyzed because roadway volumes are typically higher on weekdays than on weekend days, and therefore, more traffic impacts would occur on weekdays. This report focuses on the highest volume traffic hour for each roadway segment during the weekday A.M. and P.M. peak periods.

Pedestrians

Pedestrian conditions throughout the study area were qualitatively assessed, including the number of new pedestrian trips that would be added to the existing pedestrian network. The adequacy of pedestrian connections to nearby transit routes was also determined. Furthermore, potential pedestrian safety issues were identified, including potential conflicts between vehicular traffic and pedestrian circulation. Impacts on pedestrian conditions as a result of activities related to the Proposed Action, including traffic generation, were also qualitatively assessed.

Bicycles

Bicycle conditions throughout the study area, including safety and right-of-way issues, were evaluated qualitatively as they relate to the study area for the Proposed Action as illustrated in Figure 3.3-1. Impacts on bicycle conditions as a result of activities related to the Proposed Action, including traffic generation and driveway movements, were also qualitatively assessed.

Parking and Loading

The Proposed Action's proposed supply of parking and loading spaces was evaluated against the requirements of the City of Alameda Municipal Code.

Proposed Action Travel Demand Methodology

Travel demand refers to the new trips by vehicles, transit, pedestrians, and bicycles and other trips that would be generated by a proposed action. This section provides an estimate of the travel demand that would be generated by the Proposed Action. The travel demand estimates were based on information contained in the 2000 U.S. Census's Journey-to-Work data and the Institute of Transportation Engineers' (ITE's) *Trip Generation* (8th Edition).

Because facilities associated with either Alternative 1 or Alternative 2 would be located on former NAS Alameda property that is currently inaccessible to the public, and because both alternatives propose the same land uses types and sizes, Alternatives 1 and 2 would have the same travel demand characteristics and would affect the same study intersections.

Trip Generation

Trip generation relates land uses to the number of persons or vehicles entering or exiting the site. The trip generation for the Proposed Action was based on the proposed land uses and development program described in Chapter 2.0, (Alternatives, including the Proposed Action). Standard trip generation rates were obtained from ITE *Trip Generation* (8th Edition) and information provided by VA. The ITE rates account for vehicle trips only. For this analysis, trips made by all modes of travel were evaluated. The vehicle trips generated by the Proposed Action were adjusted using the national-average vehicle occupancy rate of 1.08 passengers per vehicle (U.S. Census, 2000) to determine total "person trips."

The person-trip generation for the Proposed Action was developed for Years 2017 and 2027. The following presents the person-trip generation for forecast Year 2017. See Section 4.0 (Cumulative Impacts) for a discussion

of forecast Year 2035. The Year 2035 was chosen for analysis, as 2035 is the forecast year for the regional travel demand model.

Initial Construction Completion 2017

The 2017 background traffic conditions are used as a future baseline against which to compare 2017 plus Proposed Action Conditions to identify impacts related to implementing Phase 1 of the Proposed Action. In 2017, the VHA OPC and Conservation Management Office would be fully built out and in operation, and the first 18 acres of the NCA National Cemetery providing space for 25,000 niches would be completed and in operation. The trip generation for the OPC and Conservation Management Office was based on ITE trip generation rates (ITE land use code 630 and 710). The OPC would have approximately 250 staff members and would include 10,000 square feet of office space for the VBA Outreach Office and NCA in the building. A 2,500-square-foot Conservation Management Office would be constructed to support the management of the California Least Tern Colony.

A cemetery is a unique land use and has unique operating characteristics, and thus, information from VA's NCA was used in this analysis instead of trip generation rates from ITE's *Trip Generation* manual. Vehicle trips to and from the cemetery would come from staff members, visitors, delivery people, and corteges. The following information was used to develop the trip generation for the cemetery:

- Memorial or inurnment services would occur Monday through Friday between 9 A.M. and 3 P.M. (based on NCA statistics);
- Approximately six services would take place Monday through Friday, with up to 15 vehicles per service, and would last approximately 15–30 minutes (based on NCA statistics);
- Seven cemetery staff members would work in the OPC building Monday through Friday between 8 A.M. and 5 P.M.;
- One delivery would occur in the weekday a.m. peak hour and p.m. peak hour;
- Visitors would amount to 40 vehicles each weekday and 60 vehicles each weekend day (based on NCA statistics); and
- Buildout of the cemetery would occur in 10-year increments providing space for 25,000 niches (based on NCA projections).

Trip generation associated with the VHA OPC, Conservation Management Office, VBA Outreach Office, and cemetery employees was converted to person trips using the 1.08 occupancy factor. Cemetery visitors and deliveries were assumed as one person per vehicle. According to VA, funeral corteges average three persons per vehicle. Table 3.3-6 presents the person-trip generation for Year 2017 for Alternatives 1 and 2.

The Proposed Action would generate 2,900 person trips during the weekday, of which 371 would occur during the weekday a.m. peak hour, 370 would occur during the weekday p.m. peak hour, and 38 would occur during the Saturday peak hour.

Subsequent Cemetery Expansion 2027

As discussed previously, the NCA Cemetery would be built in 10-year increments. The person trips associated with the additional 25,000 niches to meet the projected burial needs for Phase 2 was estimated for Alternatives 1 and 2. The number of person-trips generated by the Proposed Action including the subsequent cemetery phases would be the same as that generated by the complete facility. The only new person trips that would be generated

Table 3.3-6: Year 2017 Person-Trip Generation for Alternatives 1 and 2

Land Use	Size	Weekday Daily	A.M. Peak Hour			P.M. Peak Hour			Saturday Peak Hour of Generator		
			In	Out	Total	In	Out	Total	In	Out	Total
Office	12,500 SF	149	19	2	21	4	16	20	2	2	4
Clinic	250 employees	2,093	239	93	332	136	196	332	10	10	20
Cemetery											
Employees	7 employees	30	8	0	8	0	8	8	0	0	0
Visitors		80	4	4	8	4	4	8	7	7	14
Corteges		540 ¹	0	0	0	0	0	0	0	0	0
Deliveries		8	1	1	2	1	1	2	0	0	0
Total		2,900	271	100	371	145	225	370	19	19	38

Notes: SF = square feet; While the number of employees is used as the independent variable to calculate the trip generation for the clinic, the number of trips generated are from both employees and patients.

¹ The total number of daily person trips associated with corteges is 540 for each phase.

Source: U.S. Census, 2000; AECOM, 2012

in Year 2027 under Alternatives 1 and 2 would be from cemetery visitors and corteges. The number of OPC, Conservation Management Office, and cemetery staff members and deliveries would remain the same as those from Year 2017. Table 3.3-7 presents the person-trip generation for Year 2027 (Alternatives 1 and 2).

Table 3.3-7: Year 2027 Person-Trip Generation for Alternatives 1 and 2

Land Use	Weekday Daily	A.M. Peak Hour			P.M. Peak Hour			Saturday Peak Hour of Generator		
		In	Out	Total	In	Out	Total	In	Out	Total
Cemetery										
Visitors	80	4	4	8	4	4	8	7	7	14
Corteges	540 ¹	0	0	0	0	0	0	0	0	0
Total	620	4	4	8	4	4	8	7	7	14

Notes:

¹ The total number of daily person trips associated with corteges is 540 for each phase.

Source: AECOM, 2012

See Chapter 4 (Cumulative Impacts) for a discussion of forecast Year 2035.

Trip Distribution

Initial Construction Completion 2017

To evaluate the traffic-related effects of the Proposed Action, the trips that would be generated by the Proposed Action were distributed onto the roadway network. Trip distribution simulates the geographical pattern of travel, and was based on the residence zip codes of the employees who currently work at the existing Oakland OPC and Behavioral Health Clinic and the residence zip codes of the Veterans who currently receive treatment at the existing Oakland OPC and Behavioral Health Clinic as provided by VA. The zip code information of employees and patients would best represent the trip distribution patterns for the Proposed Action because staff members and patients would now work and receive treatment, respectively, at the new site. The estimated approach and departure directions and traffic distribution percentages for the Proposed Action are presented in Table 3.3-8.

Table 3.3-8: Trip Distribution for Alternatives 1 and 2, Phase 1

From/To	Percentage
I-880 North	19%
I-880 South	19%
I-980	7%
City of Oakland (Local)	49%
City of Alameda (Local)	6%
Total	100%

Notes: I-880 = Interstate 880; I-980 = Interstate 980
Source: AECOM, 2012

Subsequent Cemetery Expansion 2027

The person trips that would be generated for Year 2027 were not distributed onto the roadway network to obtain trip distribution numbers for Alternatives 1 and 2 from subsequent cemetery expansion. Rather, the trip distribution scenario in Year 2027 was qualitatively analyzed based on the person trips generated during the weekday, of which eight would occur during the weekday a.m. peak hour, eight would occur during the weekday p.m. hour, and 14 would occur during the Saturday peak trip hour. The trip distribution to and from the roadway network identified in Table 3.3-8 would be minimal. Consequently LOS calculations for study area intersections were not performed.

Transportation Mode Choice

The person trips associated with the Proposed Action were assigned to travel modes to determine the number of automobile, BART, AC Transit, and “other” trips. “Other” trips include those by motorcycles, taxis, bicycles, and pedestrians.

Given the close proximity and somewhat similar development pattern within the Broadway Auto Row/Medical Center neighborhood in Oakland, the *Downtown Transportation and Parking Plan* (Dowling Associates, 2003) provides empirical mode splits for commute trips by employees working in various parts of downtown Oakland.

Adjustments were made to the mode split to account for Alameda Point’s more auto-oriented, suburban, and isolated location (on an island with limited transit service and limited connectivity with the existing regional roadway network). Differences in visitor mode choice between a general employment generator (such as an office building) and a VA clinic were also considered.

Table 3.3-9 shows the mode split for the Proposed Action. It was assumed that persons taking BART to the VA Development Area would then take a VA shuttle that would operate between the 12th Street Oakland City Center BART station (the closest BART station to Alameda Point) and the VA Development Area.

Table 3.3-9: Mode Split for Alternatives 1 and 2

Mode	Percentage
Car, truck, van (includes carpool)	91%
AC Transit	2%
BART	5%
Motorcycle	0%
Bicycle	0%
Walk	2%
Amtrak	0%
Total	100%

Notes: AC Transit = Alameda–Contra Costa Transit District; BART = Bay Area Rapid Transit
 Source: AECOM, 2012

The trip generation by mode for the Proposed Action under both Alternatives 1 and 2 in Year 2017 is summarized in Table 3.3-10. Only OPC staff members and visitors, office staff members, and cemetery staff members were assumed to use all modes of transportation, whereas the major mode of transportation for cemetery corteges, deliveries, and visitors was assumed to be personal vehicles.

Trip Assignment

Trips generated by the various phases of the Proposed Action were assigned to the roadway network and study intersections based on the trip distribution pattern presented in Table 3.3-8.

Alternative 1

Construction

Traffic

Construction activities for Alternative 1, would take approximately 18 months to complete. Construction would generally occur Monday through Friday between 7 A.M. to 7 P.M. which are within City-designated construction hours per the City of Alameda Noise Ordinance Number 2712. Construction is not anticipated to occur on Saturdays, Sundays, or major legal holidays.

Table 3.3-10: 2017 Trip Generation by Mode—Alternatives 1 and 2

Direction	Person Trips						Total	Vehicle-Trips ^{2,3}
	Auto	AC Transit	BART	Walk	Bike	Other ¹		
Weekday A.M. Peak Hour								
Inbound	248	5	13	5	0	0	271	230
Outbound	92	2	5	2	0	0	101	85
Total	340	7	18	7	0	0	372	315
Weekday P.M. Peak Hour								
Inbound	133	3	7	3	0	0	146	124
Outbound	203	4	11	4	0	0	222	188
Total	336	7	18	7	0	0	368	312
Saturday Peak Hour								
Inbound	18	0	1	0	0	0	19	17
Outbound	18	0	1	0	0	0	19	17
Total	36	0	2	0	0	0	38	34

Notes: AC Transit = Alameda–Contra Costa Transit District; BART = Bay Area Rapid Transit

¹ “Other” mode includes motorcycles and taxis.

² An average vehicle occupancy of 1.08 from the 2000 U.S Census Summary File 3 QT-PT23 was used to convert person trips to vehicle trips.

³ Includes vehicle trips from cemetery visitors, corteges, and deliveries.

Sources: U.S. Census, 2000; AECOM, 2012

Construction activities would include import of fill/grading/excavation and below-grade concrete, installation of below-ground stone columns, above-grade structure, paving, and painting. The paving and painting activities would occur concurrently with the above-grade structure activity. Construction under Alternative 1 is expected to begin in July 2015, with an approximate completion date of December 2017. Details regarding the various construction activities (maximum daily trips, daily trucks, and daily personal vehicles) are included in Appendix D (Transportation Impact Study).

Throughout the construction period, construction-related trucks would flow into and out of the VA Development Area. It is anticipated that construction-related trucks would use I-880 and designated truck routes in Oakland and Alameda to access the VA Development Area. Because there are a limited number of intersections that can be used to access the VA Development Area from I-880, construction-related truck trips and Personnel Occupied Vehicles (POV) were assumed to travel through those intersections providing the most direct connection between I-880 and the VA Development Area. The details of construction traffic are summarized in Table 3.3-11.

Construction associated with Alternative 1 for all combined activities would generate a maximum of 406 daily truck trips (one-way) and 92 daily POV (one-way) trips during the peak month of construction (Table 3.3-11). All construction staging areas would be located within the VA Development Area. It is anticipated that no regular travel lanes or AC Transit bus stops would need to be closed or relocated during the construction period, because the nearest AC Transit bus stop is 1 mile away from the VA Development Area (Table 3.3-5). As described above, a low level of pedestrian activity was observed during the weekday and weekend peak periods in the Alameda Point area. Given the low volume of pedestrian activity, and because the VA Development Area is

Table 3.3-11: Estimate of Construction Traffic—Alternatives 1 and 2

Construction Activity	Approximate Start–End Date	Duration (Months)	Maximum Daily Trips (One-Way) by Activity			Peak-Month ¹ Daily Trips (One-way) for All Activities		
			Trucks	POV	Total	Trucks	POV	Total
Access Road	7/2015–12/2015	6	378	10	388	378	10	388
Cemetery Support	7/2015–12/2015	6	16	62	78	16	62	78
Conservation Management	7/2015–6/2016	12	16	62	78	6	10	16
Outpatient Clinic	7/2015–12/2016	18	16	62	78	6	10	16

Notes:

POV = Personnel Occupied Vehicles

¹ Peak month of construction occurs in December 2015

Source: AECOM, 2012

currently restricted, construction activities would not affect pedestrian circulation. Any temporary sidewalk or traffic lane closures would be coordinated with the City of Alameda to minimize impacts on traffic.

The construction-related truck trips and POV were assumed to travel through the study intersections identified for the Proposed Action. Thus, it is likely that the construction-related traffic for Alternative 1 would travel along Willie Stargell Avenue or Atlantic Avenue going to and from the VA Development Area. Some of the 406 truck trips (one-way) and 92 POV (one-way) trips during construction would travel along Willie Stargell Avenue, which is identified as a Class III bicycle route. With current bicycle and traffic volumes on the Alameda Point streets near the VA Development Area, bicycle travel generally occurs without major impedances or safety problems. Construction activities are not expected to substantially affect bicycle circulation.

Construction traffic for Alternative 1—both construction truck traffic and additional vehicular traffic from construction workers—would not substantially affect vehicular, pedestrian, and bicycle circulation and would be temporary. Intersection traffic operations were analyzed with the peak-month Phase 1 construction traffic added to Year 2017 background traffic, which includes truck trips generated from the Navy’s Environmental Restoration Program activities at Alameda point. Some aspects of the Environmental Restoration Program activities would occur simultaneously with Phase 1 construction activities of the Proposed Action. VA would, however, coordinate with the Navy in order to ensure the total number of peak month daily one-way truck trips accessing the Alameda Point area from the combination of construction of the Proposed Action and the Environmental Restoration activities would not exceed 935 truck trips. This also translates into a total number of peak hour one-way truck trips of 78. The daily and peak hour truck trip thresholds would not be exceeded in order to ensure acceptable operations at the study intersections. All study intersections are forecast to operate at acceptable levels according to the criteria of the Cities of Alameda and Oakland for the weekday a.m. and p.m. peak hours. Overall, construction-related transportation impacts would be temporary and would not have an adverse effect on weekday peak-hour traffic conditions. Accordingly, construction-related traffic impacts of Alternative 1 would not be significant.

Parking

Construction workers who drive to the VA Development Area would generate temporary demand for parking. Parking demand generated by construction workers' personal vehicles is expected to be accommodated in the portions of the VA Development Area that are not under construction at any given time and/or that have already been developed with internal roadways or runways. Construction-related parking demand would be short-term and would not result in spillover parking demand onto neighboring properties. As a result, construction-related impacts of the various phases of Alternative 1 on parking demand would not be significant.

Operation

Traffic

Traffic volumes generated by operation under Alternative 1 were added to 2017 background traffic volumes to obtain the 2017 plus Proposed Action traffic volumes (Figure 3.3-6). The 2017 plus Alternative 1 conditions would not adversely affect any of the 11 study intersections during the weekday a.m. peak hour, weekday p.m. peak hour, and Saturday peak hour (Table 3.3-12). All study intersections would operate at LOS D or better. Therefore, operational impacts of Alternative 1 on traffic operations at intersections would not be significant.

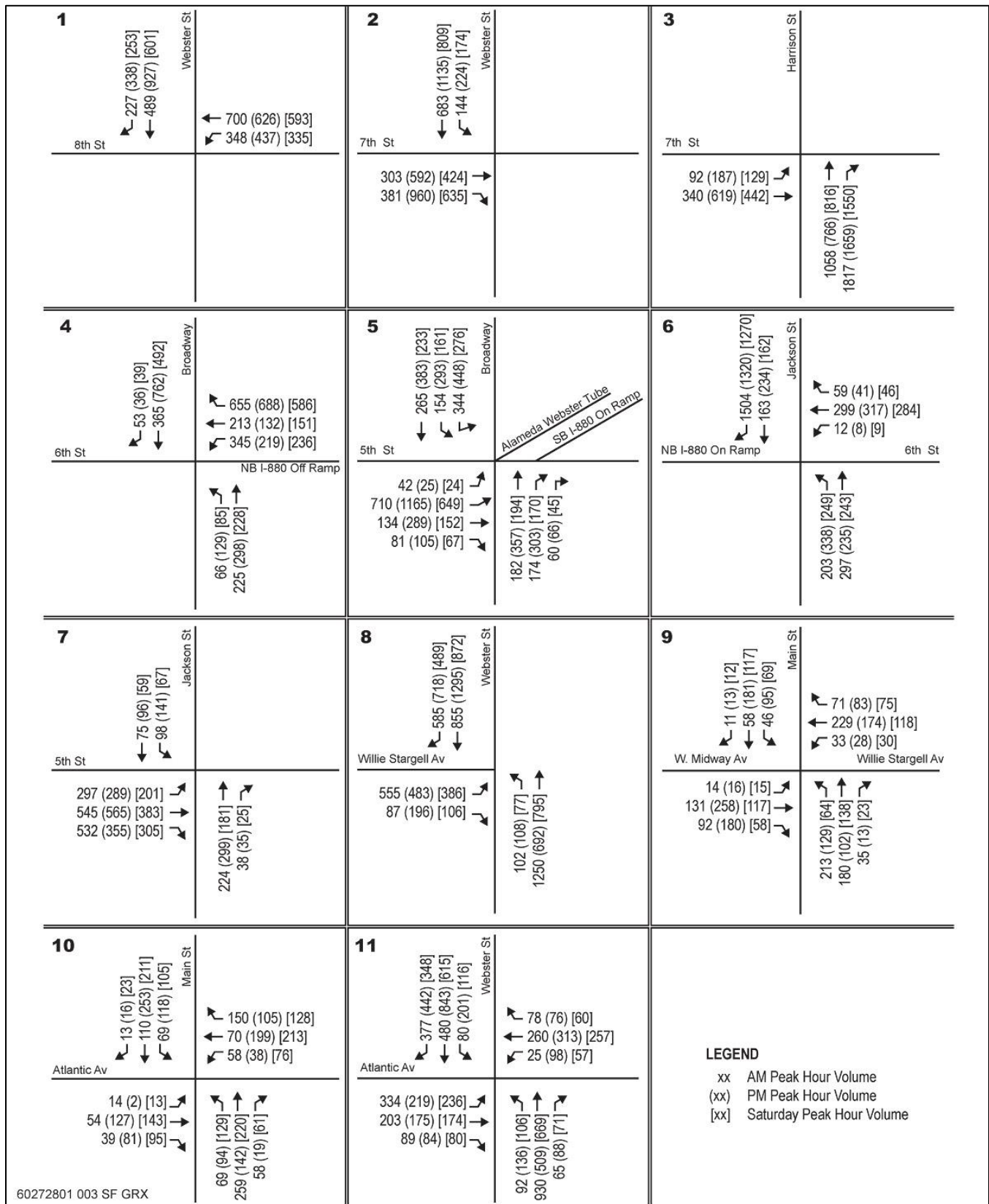
The 2017 plus Alternative 1 conditions would not adversely affect any of the 10 study roadway segments during the weekday a.m. peak hour, weekday p.m. peak hour, and Saturday peak hour (Table 3.3-13). All study roadway segments would operate at LOS D or better. Therefore, operational traffic impacts of Alternative 1 on traffic operations on roadway segments would not be significant.

Transit

As shown in Table 3.3-10, operation under Alternative 1 would generate the following numbers of transit trips:

- 25 transit trips (seven on AC Transit and 18 on BART) during the weekday A.M. peak hour;
- 25 transit trips (seven on AC Transit and 18 on BART) during the weekday P.M. peak hour; and
- Two transit trips (zero on AC Transit and two on BART) during the Saturday peak hour.

In addition, the VA shuttle that would operate between the 12th Street Oakland City Center BART station and the VA Development Area would accommodate all BART riders traveling to the VA Development Area. The 18 additional BART riders during the A.M. and P.M. peak hours associated with Alternative 1 could be AC Transit bus line 31 is the closest bus line to the VA Development Area, with a bus stop approximately 1 mile from the eastern edge of the VA Development Area. Line 31 provides service by two buses each in the northbound and southbound directions, with approximately 30-minute headways during the peak commute periods (A headway is the scheduled time interval between any two buses operating in the same direction on a route). In the future, after buildout of the proposed VHA OPC, the route of bus line 31 could be realigned to be closer to or extend into the VA Development Area, but that decision would be made by AC Transit. Assuming that the existing transit service for line 31 would remain the same, approximately two more transit riders per bus would use the bus stop during the weekday A.M. and P.M. peak hours with implementation of Alternative 1 (It was assumed that on Saturday, no new AC Transit riders would be associated with implementation of Alternative 1). These new riders could be accommodated by the current available ridership capacity of the bus service in the area accommodated by the



Source: AECOM 2012

Figure 3.3-6: 2017 Plus Proposed Action Intersection Traffic Volumes—Alternatives 1 and 2

Table 3.3-12: Intersection Levels of Service—2017 plus Alternatives 1 and 2 Conditions

Intersection	Peak Hour ¹	2017 Conditions		2017 plus Proposed Action Conditions	
		LOS	Delay ²	LOS	Delay ²
1 8th Street/Webster Street	Weekday A.M.	C	25.7	C	25.8
	Weekday P.M.	C	27.4	C	27.6
	Saturday	C	25.5	C	25.5
2 7th Street/Webster Street	Weekday A.M.	B	11.8	B	12.2
	Weekday P.M.	B	17.7	B	18.4
	Saturday	A	9.6	A	9.6
3 7th Street/Harrison Street	Weekday A.M.	B	16.2	B	16.4
	Weekday P.M.	D	45.2	D	54.7
	Saturday	B	13.2	B	13.2
4 Broadway/6th Street	Weekday A.M.	B	17.7	B	17.8
	Weekday P.M.	C	21.1	C	21.1
	Saturday	B	17.7	B	17.7
5 Broadway/5th Street	Weekday A.M.	C	33.7	D	35.6
	Weekday P.M.	E	76.4	E	80.0
	Saturday	C	28.2	C	28.3
6 Jackson Street/6th Street	Weekday A.M.	A	8.1	A	8.2
	Weekday P.M.	B	10.1	B	10.5
	Saturday	B	13.4	B	13.4
7 Jackson Street/5th Street	Weekday A.M.	C	31.8	C	32.3
	Weekday P.M.	B	15.2	B	15.7
	Saturday	B	13.5	B	13.5
8 Willie Stargell Avenue/Webster Street	Weekday A.M.	B	16.6	B	17.4
	Weekday P.M.	B	14.9	B	15.7
	Saturday	B	12.2	B	12.2
9 Willie Stargell Avenue/Main Street	Weekday A.M.	A	5.6	A	8.2
	Weekday P.M.	A	5.9	A	7.3
	Saturday	A	5.3	A	5.3
10 Atlantic Avenue/Main Street	Weekday A.M.	B	12.8	B	13.8
	Weekday P.M.	B	14.7	B	15.4
	Saturday	B	15.8	B	15.9
11 Atlantic Avenue/Webster Street	Weekday a.m.	D	44.7	D	50.7
	Weekday p.m.	C	26.7	C	27.5
	Saturday	C	23.7	C	23.8

Notes:

LOS = level of service

Bold indicates intersection operating at unacceptable levels (LOS F in downtown Oakland and LOS E or F in Alameda).

¹ "Saturday" indicates Saturday peak trip generation hour of the Proposed Action.

² Delay presented in seconds per vehicle.

Source: AECOM, 2012

Table 3.3-13: Roadway Segment Levels of Service—2017 plus Alternatives 1 and 2 Conditions

Roadway Segment	2017 No Project Conditions						2017 Plus Project (Alternatives 1 and 2) Conditions					
	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Weekday A.M. Peak Hour			Weekday P.M. Peak Hour		
	Volume	V/C ratio	LOS	Volume	V/C ratio	LOS	Volume	V/C ratio	LOS	Volume	V/C ratio	LOS
Northbound												
SR 260 Posey Tube	3,240	0.81	D	2,452	0.61	B	3,285	0.82	D	2,551	0.64	B
I-880 between 6th Street and I-980	3,766	0.38	A	4,507	0.45	A	3,780	0.38	A	4,537	0.45	A
I-880 between I-980 and 5th Street	2,015	0.25	A	2,746	0.34	A	2,026	0.25	A	2,769	0.35	A
I-880 between 5th Street and Union Street	5,063	0.84	D	4,868	0.81	D	5,074	0.85	D	4,891	0.82	D
I-880 between Union Street and 7th Street	4,004	0.50	A	3,938	0.49	A	4,015	0.50	A	3,961	0.50	A
I-880 between Embarcadero and 22nd Avenue	3,393	0.57	A	3,612	0.60	B	3,423	0.57	A	3,628	0.60	B
Southbound												
SR 260 Webster Street Tube	2,034	0.51	A	3,312	0.83	D	2,153	0.54	A	3,377	0.84	D
I-880 between 7th Street and Union Street	3,604	0.45	A	3,753	0.47	A	3,634	0.45	A	3,769	0.47	A
I-880 between 5th Street and 10th Avenue	3,940	0.49	A	3,602	0.45	A	3,951	0.49	A	3,627	0.45	A
I-880 between 10th Avenue and Embarcadero	3,321	0.55	A	3,233	0.54	A	3,332	0.56	A	3,258	0.54	A

Notes: I-880 = Interstate 880; LOS = level of service; SR = State Route; V/C ratio = volume-to-capacity ratio
Bold indicates a roadway segment operating at an unacceptable level (i.e., LOS F)
 Source: AECOM, 2012

current capacity of BART service in the area. The VA shuttle would operate 7 days a week with 30-minute headways and a capacity of up to 24 passengers. The transit trips generated by Alternative 1 would not adversely affect transit. Therefore, operational impacts of Alternative 1 on transit operations would not be significant.

An additional 25,000 cemetery niches would be provided in 2027 under Alternative 1. As described previously, it was assumed that cemetery corteges, delivery people, and visitors would travel by personal vehicles. Therefore, it is not likely that this phase of this alternative would result in any additional transit trips. Operational impacts of subsequent cemetery expansion phases under Alternative 1 on transit operations would not be significant.

Pedestrian

Pedestrian trips generated by Alternative 1 would include walk trips to and from the VA Development Area. Pedestrian walk-ins as a mode of transportation to the VA Development Area are anticipated to be infrequent, and pedestrian volumes are expected to be very low. As shown in Table 3.3-10, Alternative 1 would generate the following number of pedestrian trips to and from the VA Development Area:

- Seven walk trips (five inbound trips and two outbound trips) during the weekday A.M. peak hour;
- Seven walk trips (three inbound trips and four outbound trips) during the weekday P.M. peak hour; and
- No walk trips during the Saturday peak hour of generation.

The nearby existing Alameda Point sidewalks and crosswalks and the proposed VA Development Area sidewalks could accommodate the new pedestrian trips associated with Alternative 1. Thus, these new pedestrian trips would not adversely affect pedestrian operations along the existing sidewalks and crosswalks. A pedestrian pathway is also proposed to connect from the sidewalk at the OPC on the east and would continue toward the shoreline on the west, stopping before the 100-foot band under BCDC jurisdiction. The volume of pedestrians near the VA Development Area is relatively low. Thus, no conflicts between traffic from Alternative 1 and pedestrians are expected, and public sidewalks would not become substantially overcrowded and create potentially hazardous conditions for pedestrians. Operational impacts of Alternative 1 on pedestrians would not be significant.

Bicycle

Alternative 1, Phase 1 is not expected to generate bicycle trips (Table 3.3-10). Bicycle travel generally occurs without major impedances or safety problems in the Alameda Point area. Bicycle lanes would be located within the new two-lane main access road and would be painted for separation in each direction. As a result, implementing Alternative 1, Phase 1 would not affect the demand and use of existing and proposed bicycle facilities in Alameda and Oakland. Alternative 1, Phase 1 would generate 311 weekday A.M. and 311 weekday P.M. peak-hour vehicle trips (Table 3.3-10). The vehicle trips would be distributed onto the roadway network as shown in Table 3.3-8 and would not interfere with, impede, or create safety concerns for bicycle facilities. Therefore, operational impacts of Alternative 1 on bicycles would not be significant.

Parking and Loading

The following parking and loading requirements in the City of Alameda Municipal Code applicable to Alternative 1:

- *Office use:* 2.5 spaces for each 1,000 square feet of occupied floor area;
- *Clinic use:* 4.0 spaces for each 1,000 square feet of occupied floor area; and
- *Other uses:* 1.0 loading space for every nonresidential building in excess of 12,500 square feet.

Based on these requirements, VA would be required to provide 623 parking spaces (31 spaces for the office use and 592 spaces for the clinic use) and one loading space under Alternative 1.

Under Alternative 1 VA would provide a total of 640 parking spaces for employees, visitors, and patients, and two full-size truck bays to accommodate a typical semi-truck (approximately 55 feet in length). The total proposed parking supply consists of 630 parking spaces adjacent to the VHA OPC building and approximately 10 spaces

adjacent to the Conservation Management Office. The total proposed parking supply (640 spaces and two loading spaces) would satisfy the City of Alameda Municipal Code's requirements of 623 parking spaces and one loading space for Alternative 1. VA also would provide approximately 30 parking spaces in the proposed NCA Cemetery adjacent to each committal service shelter. Two committal service shelters (including 60 parking spaces) would be built by 2017. Thus, adequate parking would be provided under Alternative 1, Phase 1. Operational impacts of Alternative 1 related to parking and loading would not be significant.

Site Access and Circulation

Access to the VA Development Area would be provided via Main Street, Navy Way, and West Redline Avenue (Figure 3.3-1). The intersection of West Redline Avenue and Monarch Street would connect with the proposed main access road serving the VA Development Area.

Other internal roads would connect to the main access road and would provide access to the VHA OPC building, Conservation Management Office, and NCA Cemetery (see Figure 2-2). In addition, a cortege assembly area would consist of one or more lanes for vehicles to queue before proceeding to a committal service shelter. The cemetery road would be developed in accordance with VA design and construction standards and specifications for national cemeteries. The main access road would be developed in accordance with the design and construction standards of the American Association of State Highway and Transportation Officials (AASHTO), and would incorporate bicycle lanes in each direction.

Taxis, private vehicles, and emergency vehicles would use the new main access and internal roadways. An additional emergency vehicle access point would be provided on the eastern perimeter of the VA Transfer Parcel. Implementation of Alternative 1 would not adversely affect site access and circulation or access by emergency vehicles; access to and from the VA Development Area, as well as internal circulation within the VA Development Area, would adequately serve travel demand and would be designed in accordance with accepted VA and AASHTO standards. Accordingly, operational impacts of Alternative 1 related to site access and circulation would not be significant.

Traffic Safety Impacts

The utility corridor would be built to City of Alameda design standards. The internal main access roadway would be built to the AASHTO standards, as this would be a Federal roadway. The internal roadways that would provide circulation within the cemetery would be built in compliance with Section 12.7, "Road Width and Road Minimum Radius," in Section 5.1, "Site Development Design Criteria for National Cemetery Projects, Department of Veterans Affairs," of VA's *National Cemetery Administration (NCA) Facilities Design Guide* (VA, 2010). The design guide specifies the road widths and minimum radius for the various types of roads (i.e., entrance road, primary road, secondary road, service roads, and committal service shelter drives). The design of the NCA Cemetery's roads should accommodate anticipated traffic volume at a maximum design speed of 24 kilometers per hour (15 mph) (VA, 2010). Because the access and internal circulation roads would conform to the City of Alameda, AASHTO, and VA NCA roadway design standards, impacts of Alternative 1 on traffic safety would not be significant.

Alternative 2 (Preferred Alternative)

Construction

Traffic

Construction activities and their level of intensity under Alternative 2 would be the same as those described for Alternative 1. These activities would include import of fill/grading/excavation and below-grade concrete, above-grade structure, paving, and painting. For the same reasons as cited for Alternative 1, the effect of construction traffic associated with Alternative 2—both construction truck traffic and additional vehicular traffic from construction workers—would not substantially affect vehicular, pedestrian, and bicycle circulation. Therefore, as under Alternative 1, construction-related traffic impacts of Alternative 2 would not be significant.

Parking

Construction-related parking impacts of Alternative 2 would be the same as those described for Alternative 1 because parking demand would be accommodated in the portions of the VA Development Area that are not under construction at any given time. As a result, construction-related parking demand under Alternative 2 would be short term and temporary and would be minor. As with Alternative 1, construction-related parking impacts of Alternative 2 would not be significant.

Operation

Traffic

Vehicle trips generated under Alternative 2 would be the same as those generated under Alternative 1 (Table 3.3-10). The resulting traffic volumes for 2017 plus Proposed Action Alternative 2 operations are the same as for Alternative 1 (Figure 3.3-6). The LOS results for all 11 study intersections and 10 roadway segments under Alternative 2 are the same as those presented previously for Alternative 1. Operational impacts of Alternative 2 on traffic operations would not be significant.

Transit

Transit trips generated under Alternative 2 would be the same as those generated under Alternative 1 (Table 3.3-10). As under Alternative 1, the transit trips generated by Alternative 2 would be accommodated by the current available ridership capacity of the area's AC Transit bus service and of BART. In addition, the VA shuttle that would operate between the BART station and the VA Development Area would accommodate all BART riders traveling to the VA Development Area. As a result, the operational impact of Alternative 2 on transit operations would not be significant.

Pedestrian

Pedestrian trips generated under Alternative 2 would be the same as those generated under Alternative 1 (Table 3.3-10). The nearby existing Alameda Point sidewalks and the proposed VA Development Area sidewalks could accommodate the new pedestrian trips associated with Alternative 2. A pedestrian pathway is also proposed to connect from the sidewalk at the OPC on the east and would continue toward the shoreline on the west, stopping

before the 100-foot band under BCDC jurisdiction. Thus, these new pedestrian trips would not adversely affect pedestrian operations along the existing sidewalks and crosswalks. The volume of pedestrians near the VA Development Area is relatively low. Thus, no conflicts between traffic from Alternative 2 and pedestrians are expected, and public sidewalks would not become substantially overcrowded and create potentially hazardous conditions for pedestrians. Operational impacts of Alternative 2 on pedestrians would not be significant.

Bicycle

Bicycle trips generated under Alternative 2 would be the same as Alternative 1 and summarized in Table 3.3-10. Bicycle lanes would be located within the new two-lane main access road and would be painted for separation in each direction. Bicycle impacts under Alternative 2 would be the same as Alternative 1 and discussed above. The negligible increase in bicycle trips under Alternative 2 within the area would not be substantial enough to affect overall bicycle circulation in the area or the operations of adjacent bicycle facilities. Thus, bicycle impacts would not be significant under Alternative 2.

Parking and Loading

Under Alternative 2, VA would need to meet the same parking and loading requirements of the City of Alameda Municipal Code as described above for Alternative 1. The total proposed parking supply would consist of 640 parking spaces and two loading spaces, satisfying the City of Alameda Municipal Code's requirements for 623 parking spaces and one loading space. Thus, adequate parking would be provided under Alternative 2. Operational impacts of Alternative 2 related to parking and loading would not be significant.

Site Access and Circulation

Site access and circulation under Alternative 2 would be similar to site access and circulation under Alternative 1, except that the internal roadways would have a slightly different alignment than under Alternative 1. The proposed internal main-access roadway for the VHA OPC building and the NCA Cemetery would tie into Alameda's existing roadway system. This roadway would be located along the northern boundary of the VA Development Area and would incorporate bicycle lanes in each direction. Taxis, private vehicles, and emergency vehicles would use the new main access and internal roadways.

The VHA OPC building would be located farther north under Alternative 2 and would have a different building orientation than under Alternative 1. The cemetery would be developed within one 80-acre area west of the OPC building, rather than in two separate areas on both the west and east sides of the OPC building as under Alternative 1. For the same reasons as described for Alternative 1, implementing Alternative 2 would not have an adverse effect on site access and circulation or emergency access. Operational impacts of Alternative 2 related to site access and circulation would not be significant.

Traffic Safety Impacts

Traffic safety impacts of Alternative 2 would be the same as those of Alternative 1. The utility corridor would be built to City of Alameda design standards. The main internal access road along the northern boundary of the VA Development Area would be built to AASHTO standards. The internal roadways that would provide circulation within the cemetery would be built in compliance with Section 12.7, "Road Width and Road Minimum Radius,"

in Section 5.1, “Site Development Design Criteria for National Cemetery Projects, Department of Veterans Affairs,” of VA’s *National Cemetery Administration (NCA) Facilities Design Guide* (VA, 2010). As a result, as with Alternative 1, impacts of Alternative 2 on traffic safety would not be significant.

No Action Alternative

Construction

Under the No Action Alternative, the Fed-to-Fed transfer would not take place, and no VA facilities would be constructed. Therefore, no significant construction-related impacts to transportation, traffic, circulation, or parking would occur.

Operation

Under the No Action Alternative, no new vehicle, transit, bicycle, or pedestrian trips or new parking demand would be generated because no new facilities or uses are proposed. Thus, no operational impact on study intersections, existing transit services, existing roadways, parking, loading, site access/circulation, or traffic safety would occur under the No Action Alternative.

Under the No Action Alternative, the Fed-to-Fed transfer would not take place, and no VA facilities would be operated on the property. The property would be retained by Navy in caretaker status until another action on the property is taken. Therefore, no significant operational-related to transportation, traffic, circulation, or parking impacts would occur.

3.3.4 References

- AECOM. 2012. *Alameda Point Transfer, Clinic, and Cemetery Environmental Assessment Transportation Impact Study*.
- Alameda, City of (Alameda). 2010 (November). *City of Alameda 1999 Bicycle Master Plan (Updated November 2010)*.
- Alameda County Transportation Commission (ACTC). 2011. Congestion Management Program 2011. December.
- Oakland, City of (Oakland). 2007 (December). *City of Oakland Bicycle Master Plan*.
- Dowling Associates. 2003. *Downtown Transportation and Parking Plan*. Prepared for the City of Oakland Redevelopment Agency & Community and Economic Development Agency.
- Transportation Research Board (TRB). 1985 (August). *Highway Capacity Manual*. Washington, DC.
- . 2000. *Highway Capacity Manual 2000*. Washington, DC.
- U.S. Census Bureau (U.S. Census). 2000. Census 2000 Summary File 3, QT-P23. Journey to Work: 2000. Washington, DC.

U.S. Department of Veterans Affairs (VA). 2010 (March). *National Cemetery Administration (NCA) Facilities Design Guide*. Published June 1999, Section 5 revised March 2010. National Cemetery Administration, Office of Facilities Management, Facilities Quality Office. Washington, DC. Section 5, “Design Criteria.”

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