
2.0 ALTERNATIVES

Council on Environmental Quality (CEQ) regulations require that an environmental impact statement (EIS) contain a description of a proposed action and the alternatives considered. Agencies are directed to use the National Environmental Policy Act (NEPA) process “to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the environment” (40 Code of Federal Regulations [CFR] 1500.2[e]). Alternatives found to be unreasonable do not need to be evaluated in an EIS.

The Proposed Action assessed in this EIS is the renovation, expansion, and operation of the San Francisco Veterans Affairs Medical Center (SFVAMC) Fort Miley Campus to serve Veterans in the San Francisco Bay Area and the North Coast. This chapter describes the alternatives development process, alternatives considered but eliminated from further review, and alternatives selected for analysis in this EIS.

2.1 ALTERNATIVES DEVELOPMENT PROCESS

This section discusses the process followed for identifying possible alternatives leading to the Proposed Action ultimately subject to evaluation in this EIS.

VA has several internal processes for planning and programming to provide the services and necessary accompanying facilities, depending on the size, scale, and timing of the need. These can range from simple funding request to meet a smaller, immediate need to long range, SFVAMC-wide planning processes. Any individual facility project request is incorporated into the Veteran Integrated Service Network (region)-level Strategic Capital Investment Program.

As part of this process, SFVAMC first undertook completion of the Draft Institutional Master Plan (IMP), which proposed, in essence, that all current and future needs be addressed solely within the confines of the existing SFVAMC Fort Miley Campus. The Draft IMP (released in October 2010) demonstrated that, although it may be physically possible, it was unworkable in practice from a variety of perspectives.

Based on the results of this planning exercise, SFVAMC then commissioned the Long Range Development Plan (LRDP), which for purposes of master planning outlines the facilities on the SFVAMC Fort Miley Campus divided into planned phases of implementation. The LRDP is a living, dynamic document, one that outlines a sequence of steps for implementation in both the near and long term while also enabling the institution flexibility to shift priorities as needed. The LRDP is anticipated to change in the future as priorities change and shift to meet the needs of Veterans. The LRDP for the SFVAMC is expected to be published coincident with release of the Draft EIS.

2.2 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER REVIEW

Several alternatives were considered during the planning process leading to the Draft LRDP. The following alternatives were considered but eliminated from further review in this EIS. The reasons for the elimination of these alternatives are provided below.

- **Full Buildout of Existing Campus as Proposed in the 2010 Draft IMP**—The potential alternative to develop all 924,200 gross square feet (gsf) of new building space at the SFVAMC Fort Miley Campus to meet space deficiencies is no longer considered feasible, and SFVAMC has decided to change the future building layout for the Campus.
- **Expansion of Existing Campus into East and West Fort Miley**—A potential alternative for expanding the SFVAMC Fort Miley Campus into the adjacent National Park Service East and West Fort Miley areas by up to 24 acres is considered not feasible. As part of the Golden Gate National Recreation Area, land in East and West Fort Miley would not be available for development.
- **Relocation of Entire Campus Elsewhere in San Francisco**—A potential alternative to relocate all SFVAMC facilities to another site in San Francisco is considered not feasible for a variety of reasons. Based on current projects for new medical centers, the estimated cost for construction of a new facility exceeds \$2 billion. Commissioning a new facility, including furnishing all the necessary equipment, would require an additional several hundred million dollars. In addition to these facility/equipment costs are those associated with the staging and actual relocation of all the services and patients. Even if the SFVAMC were to vacate the SFVAMC Fort Miley Campus, VA would not be relieved of its historical preservation obligations at the Campus, requiring VA to expend funds to protect facilities with no direct benefit to Veterans.

2.3 DESCRIPTION OF EIS ALTERNATIVES

After considering the variety of potential alternatives through the planning process described above and eliminating those that were deemed infeasible, three alternatives remained for further evaluation in this EIS process:

- **Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative**—Alternative 1 is a reduced variation of the layout originally proposed in the October 2010 Draft IMP. Rather than the Draft IMP's proposed 924,200 additional gsf at the SFVAMC Fort Miley Campus, Alternative 1 proposes 394,000 gsf of additional space along with seismic upgrades to various existing structures on the Campus in one near-term phase (Phase 1) and one long-term phase (Phase 2).
- **Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative**—Alternative 2 retains all of the near-term (Phase 1) project components and many of the long-term (Phase 2) project components that are also included in Alternative 1. Some of the proposed long-term components are located off-site at an unknown site, to be determined later, within the Mission Bay area of San Francisco.
- **Alternative 3: No Action Alternative**—Under the No Action Alternative (Alternative 3), the LRDP would not be implemented. The purpose of analyzing the No Action Alternative is to allow decision-makers to compare the impacts of the action alternatives against the impacts of no action in the future.

2.3.1 Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative

Alternative 1 Near-Term Projects

Land Uses

Alternative 1 (Phase 1)¹ near-term project components would involve new development and/or retrofitting of patient care, research, administrative, hoptel, and parking structures on the existing 29-acre SFVAMC Fort Miley Campus through mid-2015. See Table 2-1 for detailed square footage and phasing related to implementation of the near-term (Phase 1) project components of Alternative 1. See Figure 2-1 for the Alternative 1 (Phase 1) Footprint and Concept Plan through mid-2015. Note that the Alternative 1 (Phase 1) development footprint would take up approximately 1.34 acres within the previously developed areas of the existing 29-acre Campus.

All new development under Alternative 1 would be designed to achieve Leadership in Energy and Environmental Design (LEED[®]) Silver certification and would implement the VA Strategic Sustainability Performance Plan (VA SSPP), which identifies VA's sustainability goals and defines VA's policy and strategy for achieving these goals.

In addition to new development and associated demolition, buildings would be retrofitted according to VA seismic design requirements (VA Directive H-18-8), in compliance with Executive Order 12941. Table 2-1 indicates which buildings would be seismically retrofitted.

Construction

Implementation of the near-term (Phase 1) project components of Alternative 1 would involve five subphases of development and retrofitting over approximately 2 years and 8 months, with completion anticipated by August 2015. See Table 2-1 for a detailed schedule and phasing for construction of the near-term (Phase 1) project components of Alternative 1.

All construction staging would occur on the SFVAMC Fort Miley Campus, within previously disturbed areas. Demolition would result in a maximum of 56,000 cubic feet of construction waste,² at least 50 percent of which would be reused or recycled and diverted from landfills in accordance with the VA SSPP.

Landscaping and Open Space Areas

The LRDP has taken as a core design principle the full integration of the site into the surrounding park and pedestrian systems. As stated on page 1.1 of the SFVAMC LRDP:

A primary driver of this Working Planning Document (SFVAMC LRDP) is to coordinate the location and massing of the buildings and underlying infrastructure critical to the continued development of the Veterans Affairs complex, with the surrounding parks and city so that the amenities of the newly created urban spaces for public use will transform a Hospital into an Urban Campus, an integral part of the City of San Francisco.

¹ LRDP Phase 1 spans the 2012 through 2015 time frame.

² The volume of demolition waste generated was calculated based on the square footage of all buildings proposed for demolition (4,000 square feet total) multiplied by the estimated height of each building (all buildings proposed for demolition are single story). The height of each building story was assumed to be 14 feet.

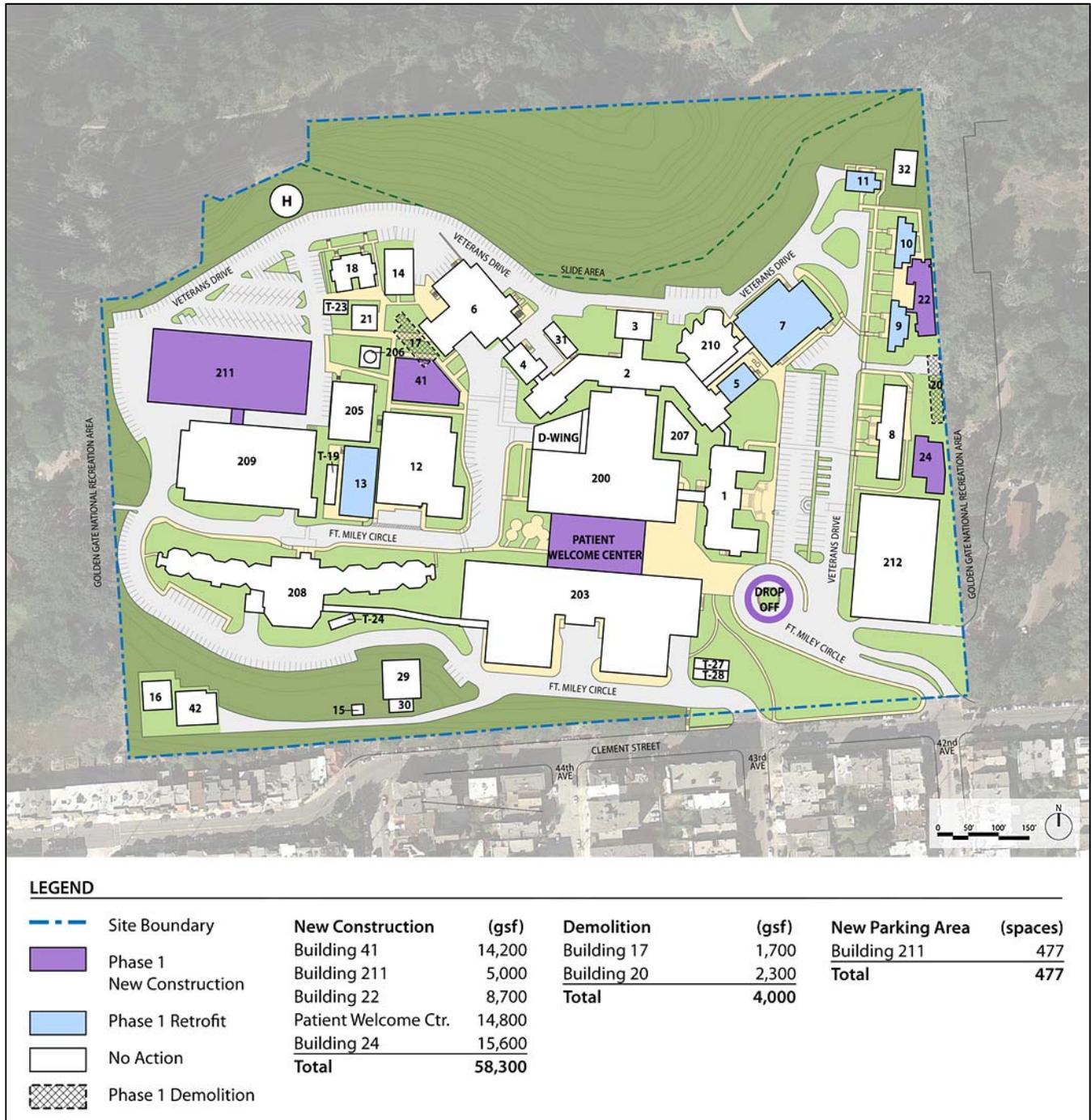
Table 2-1: Alternative 1 Near-Term (Phase 1) Area, Massing, and Construction Schedule at the SFVAMC Fort Miley Campus (2013 through Mid-2015)¹

Phase	Proposed Action	Gross Square Feet	Net New Gross Square Feet	Number of Stories	Construction Duration ²	Approximate Completion Date ³
Phase 1						
1.1	Building 41 Research (requires demolition of Building T17)	14,200 (of which 4,600 is mechanical penthouse)	12,500	2	12 months	December 2013
1.2	Emergency Operations Center and Building 211 Parking Garage Expansion (477 spaces; 295 net new) ⁴	155,000 (of which 2,000 is EOC and 3,000 is storage space)	155,000	5	17 months	May 2014
1.3	Building 22 Hoptel and Seismic Retrofit Buildings 5, 7, 9, 10, 11, and 13	8,700	8,700	2	13 months	January 2014
1.4	Patient Welcome Center and Drop-off Area	14,800 (1,350 of which is the drop-off kiosk)	14,800	1	25 months	August 2015
1.5	Building 24 Mental Health Clinic Expansion (requires demolition of Building 20)	15,600	13,300	3	14 months	June 2015
Total Phase 1 Area		208,300	204,300	Total Phase 1 Duration	32 months	

Source: VA, 2012

Notes:

¹ This table reflects approximate construction schedules and completion dates.² Construction includes all demolition, grading, structure development, and painting activities associated with the Proposed Action.³ Dates shown represent approximate time frames, as funding has yet to be secured for some project components. Furthermore, because of space restrictions, the ability of VA to construct multiple phase components simultaneously is limited.⁴ The Emergency Operations Center and Building 211 Parking Garage square footage in this table reflects both the habitable (center and storage area) and the nonhabitable (parking garage) space planned for construction. Although the SFVAMC Long Range Development Plan discusses habitable square footage, this EIS must evaluate the impacts associated with construction of the entire square footage, including nonhabitable space.



Source: VA, 2012

Note: The five Phase 1 sub-phase components identified in Table 2-1 are indicated on this figure.

Figure 2-1: Alternatives 1 and 2 (Phase 1) Footprint and Concept Plan through Mid-2015—SFVAMC Fort Miley Campus

There are 232 trees within the landscaped portions of the SFVAMC Fort Miley Campus, as determined during a tree survey conducted on February 15, 2009, to assess fall and limb breakage hazards. For tree counting purposes, only trees on the Campus with diameters at breast height greater than 1 inch and more than 10 feet in height were measured and examined for their failure potential. Under Alternative 1, 65 of these trees would be removed because of their fall and limb breakage potential. In some cases, the aesthetics-related effects of removal of certain vulnerable trees slated for removal would be offset by replacing removed trees with trees that are more adapted to the windy conditions at the Campus. Specifically, trees would be planted along internal circulation roads, within surface parking lots, and near the two Campus entrances.

During Phase 1, various existing open space areas of the SFVAMC Fort Miley Campus would be developed with proposed buildings, including the Mental Health Clinic Expansion and the Hoptel Addition. In addition, a new landscape area would be developed within the drop-off circle that is proposed as part of the Patient Welcome Center and Drop-off Area, and a healing garden would be integrated with the Welcome Center.

Utilities Infrastructure Improvements

Water

Improvements to the existing SFVAMC Fort Miley Campus's water distribution system are required with implementation of the near-term projects under Alternative 1, because of utility conflicts with proposed facilities and other site improvements. Water system improvements would involve the removal and/or abandonment of existing water mains within proposed building footprints and the installation of new water mains to provide potable water and water for fire hydrants and sprinklers to new buildings. Specifically, new domestic water service connections would be established to provide potable water to the buildings, and new fire hydrants and fire sprinkler system services would be installed to meet National Fire Protection Association Fire Code requirements.

Sewer and Stormwater

The current arrangement method of discharge (a combined sewer system that collects, conveys to the city, treats, and discharges both sewage and stormwater) would continue for the most part with implementation of Alternative 1; however, some modifications to catch basins, manholes, and pipelines would be required to support the new near-term facilities. Stormwater runoff would be minimized in accordance with executive orders, regulatory requirements, and VA design guidance. Furthermore, where practical, stormwater runoff would be redirected away from the sewer system to designed direct-discharge outfalls. New facilities would include landscaping and sustainable features, such as green roofs and bioswales, as well as energy dissipaters to prevent concentrated flows. Site drainage would flow via at-grade catch basins and area drains to landscaped areas, and to underground gravity lines. In addition, the building and site contours would be designed to minimize stormwater runoff.

The near-term projects under Alternative 1 would involve the addition of new buildings supporting medical uses similar to those at the existing SFVAMC Fort Miley Campus; therefore, improvements to the Campus' existing sanitary sewer system would be required. These improvements would involve removing and/or abandoning existing sanitary sewer lines within proposed building footprints, and installing new sewer lines from new facilities to the existing combined sewer interceptor on Clement Street.

Electricity

The existing electrical system is being upgraded through the Electrical Systems Upgrades Project. As part of this project, Pacific Gas and Electric Company (PG&E) is upgrading an existing feeder line along Clement Street to convert the existing secondary service to the SFVAMC Fort Miley Campus to a low-level transmission service. To support increased loads, SFVAMC is replacing and upgrading the existing infrastructure to provide adequate and reliable power to the existing Campus, and to accommodate future building loads.³ Because of the implementation of the Electrical Systems Upgrades Project, no additional improvements to the external electrical distribution system (i.e., within or along roads) would be required as part of the near-term projects.

Emergency Generator

A new 1,000-kilowatt (kW) engine-generator has been installed to the switchgear located in Building 205. This addition has increased the overall total backup power system capacity to 3,385 kW, more than 50 percent of the expected full future load, which makes the backup system adequate to support future critical and life-safety power needs.

Improvements to the SFVAMC Fort Miley Campus's existing natural gas distribution system may be required to serve additional new buildings supporting medical uses proposed as part of the near-term projects under Alternative 1. These improvements would involve removing and abandoning existing distribution lines within proposed building footprints and installing new distribution lines (originating from PG&E's main gas line on Clement Street) to provide natural gas to new facilities.

Site Access, Circulation, and Parking

The SFVAMC Fort Miley Campus would continue to experience multimodal access and circulation, including passenger vehicles, buses, shuttle vans, delivery vehicles, emergency medical and fire vehicles, and pedestrians.

Vehicular Access and Circulation

Under Alternative 1, vehicular access to the SFVAMC Fort Miley Campus, including public bus access, would continue to be provided at the intersections of Clement Street and 42nd Avenue and Clement Street and 43rd Avenue. As part of the Patient Welcome Center Drop-Off, circulation within the Campus would be altered slightly to include a roundabout near the entrance of Clement Street and 42nd Avenue. Changes from existing conditions would include disconnecting the internal roadway, Fort Miley Circle, between Buildings 200 and 203 to create open space and a pedestrian zone, and narrowing Fort Miley Circle between Buildings 200 and 12 to provide traffic calming and incorporate a healing garden area with pedestrian walkways.

San Francisco Municipal Transportation Authority bus access to the SFVAMC Fort Miley Campus would continue to be provided. However, because of the changes to create the open space and pedestrian zone between Buildings 200 and 203, buses would utilize the Patient Welcome Center Drop-Off and the south side of the

³ Specifically, the existing underground 4.16-kV ring bus feeders would be replaced with new underground 15-kV double-ring bus feeders, cable pull boxes, and feeder loop isolation switches around the outer perimeter of the SFVAMC Fort Miley Campus. A total of 12 substation transformers and electrical distribution panels would provide power to the various buildings. The new electrical system would have the capacity to support a demand of approximately 6,000 kW.

roundabout near the entrance of Clement Street and 42nd Avenue; they would no longer travel around the entire Fort Miley Circle loop.

Parking

Under Alternative 1 (Phase 1), 272 new car spaces and 23 new motorcycle spaces would be provided as part of the proposed Emergency Operations Center and Building 211 Parking Garage Expansion on the SFVAMC Fort Miley Campus. In addition, a total of 32 parking spaces would be eliminated (via restriping) from a combination of surface parking lots H, J, K, and L. As a result, there would be a total of 263 net new parking spaces on the Campus. Thus, given the Campus' existing parking supply of 1,253 spaces, there would be a total of 1,516 parking spaces for employees, visitors, and patients by mid-2015.

Pedestrian Access and Circulation

Under Alternative 1 (Phase 1), sidewalks and walkways for pedestrians would be modified to provide improved connectivity. These improvements to the pedestrian circulation system are expected to encourage alternative modes of transportation. Changes include disconnecting Fort Miley Circle between Buildings 200 and 203 to create the Patient Welcome Center, narrowing Fort Miley Circle between Buildings 200 and 12 to provide traffic calming and incorporate a healing garden area with pedestrian walkways, and providing pedestrian pathways and access adjacent to Building 41 to allow for improved connectivity and flow between facilities.

Alternative 1 Long-Term Projects

Land Uses

Alternative 1 long-term (Phase 2)⁴ project components would primarily involve new development and/or retrofitting of patient care, research, administrative, and ambulatory care structures on the 29-acre SFVAMC Fort Miley Campus through 2023. See Table 2-2 for detailed square footage and phasing related to implementation of the long-term (Phase 2) project components of Alternative 1. See Figure 2-2 for the Alternative 1 (Phase 2) Footprint and Concept Plan through 2023. Note that the Alternative 1 long-term (Phase 2) development footprint would take up approximately 0.25 net new acre within the previously developed areas of the existing 29-acre Campus.

As with near-term (Phase 1) development, all new development in Phase 2 would be designed to achieve LEED® Silver certification and would implement the VA SSPP. In addition to the new development and associated demolition, buildings would be seismically retrofitted according to VA seismic design requirements (VA Directive H-18-8), in compliance with Executive Order 12941. Table 2-2 indicates which buildings would be seismically retrofitted.

Furthermore, there would be a need to add approximately 24,000 square feet of modular building swing space into the northwest parking lot of the SFVAMC Fort Miley Campus in June 2015. This modular swing space would be temporary; it would be removed from the northwest parking lot after approximately 13 months. The use of this modular swing space would not require any construction or demolition of buildings.

⁴ LRDP Phase 2 spans the late 2015 through 2023 time frame.

Table 2-2: Alternative 1 Long-Term (Phase 2) Area, Massing, and Construction Schedule at the SFVAMC Fort Miley Campus (Mid-2015 through 2023)¹

Phase	Proposed Action	Gross Square Feet	Net New Gross Square Feet	Number of Stories	Construction Duration ²	Approximate Completion Date ³
Phase 2						
2.1	Operating Room Expansion (D-Wing)	5,300	5,300	1	13 months	October 2016
2.2	IT Support Space Expansion (Building 207)	7,000	7,000	2	19 months	October 2017
2.3	Building 23 (Mental Health Research Expansion)	15,000	15,000	3 (+ basement)	14 months	July 2017
2.4	Building 40 Research (requires demolition of Buildings 12, 18, 21, and T-23 as well as removal of 14) and Seismic Retrofit of Buildings 1, 6, and 8	100,000	42,400	5 (+ basement)	79 months	April 2023 ³
2.5	Ambulatory Care Center	120,000	120,000	5 (+basement)	20 months	January 2023
Total Phase 2 Area		247,300	189,700	Total Phase 2 Duration	91 months	

Source: VA, 2012

Notes:

¹ This table reflects approximate construction schedules and completion dates.² Construction includes all demolition, grading, structure development, and painting activities associated with the Proposed Action.³ Dates shown represent approximate time frames, as funding has yet to be secured for some project components. Furthermore, because of space restrictions, the ability of VA to construct multiple phase components simultaneously is limited.

Construction

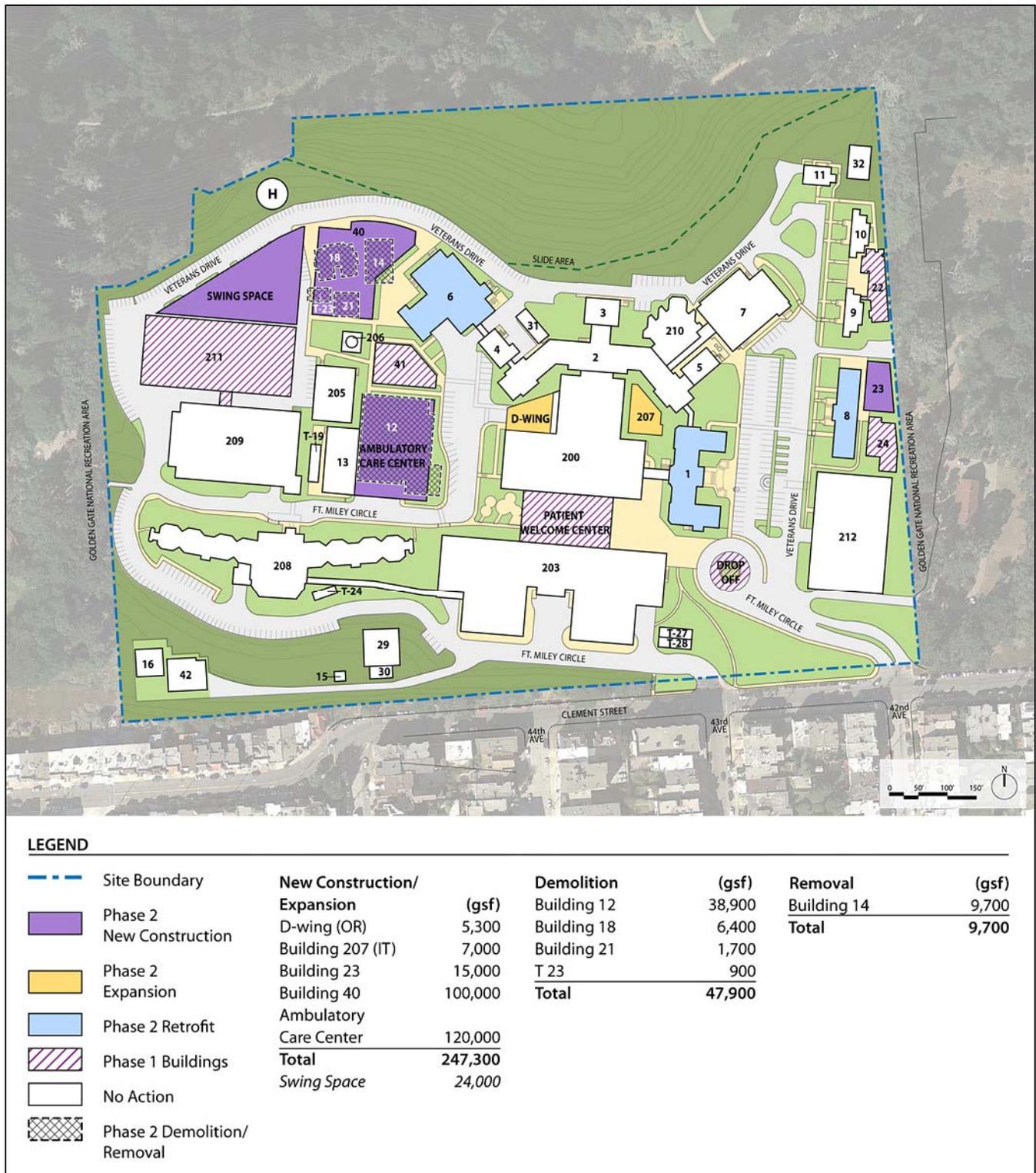
Implementation of the long-term (Phase 2) project components of Alternative 1 would involve five subphases of development and retrofitting over approximately 7 years and 7 months, with completion anticipated by April 2023. See Table 2-2 for a detailed schedule and phasing for construction of the long-term (Phase 2) project components of Alternative 1.

All construction staging would occur within the SFVAMC Fort Miley Campus, in previously disturbed areas. Demolition would result in a maximum of 2,210,600 cubic feet of construction waste,⁵ at least 50 percent of which would be reused or recycled and diverted from landfills in accordance with the VA SSPP.

Landscaping and Open Space Areas

As part of Alternative 1 (Phase 2), a Central Green park area would be completed with permanent landscaping, walkways, and gardens to serve employees, patients, visitors, and the surrounding community.

⁵ The volume of demolition waste generated was calculated based on the square footage of all buildings proposed for demolition (57,600 square feet total) multiplied by the estimated height of each building (all buildings proposed for demolition are single-story except Building 12, which is two stories). The height of each building story was assumed to be 14 feet.



Source: VA, 2012

Note: The five Phase 2 subphase components identified in Table 2-2 are indicated in this figure.

Figure 2-2:

Alternative 1 Long-Term (Phase 2) Footprint and Concept Plan through 2023—SFVAMC Fort Miley Campus

Utilities Infrastructure Improvements

Water

Improvements to the water distribution system for the long-term projects under Alternative 1 would be similar to those implemented for the near-term projects under Alternative 1.

Sewer and Stormwater

Improvements to the sewer and stormwater collection and conveyance system for the long-term projects under Alternative 1 would build on and be similar to those implemented for the near-term projects under Alternative 1.

Electricity and Natural Gas

It is unknown at this time whether improvements to the electrical distribution system would be necessary as part of the long-term projects under Alternative 1. Improvements to the natural gas distribution system for the long-term projects under Alternative 1 would build on and be similar to those implemented for the near-term projects under Alternative 1.

Site Access, Circulation, and Parking

The SFVAMC Fort Miley Campus would continue to experience multimodal access and circulation, including passenger vehicles, buses, shuttle vans, delivery vehicles, emergency medical and fire vehicles, and pedestrians.

Vehicular Access and Circulation

Under Alternative 1 long-term projects, there would be no major changes to SFVAMC Fort Miley Campus access and circulation. Campus access would continue to be provided at the intersections of Clement Street and 42nd Avenue and Clement Street and 43rd Avenue. Circulation would continue to be provided internally for all vehicles.

Parking

Development under Alternative 1 (Phase 2) would not include provision of additional on-site parking spaces at the existing SFVAMC Fort Miley Campus. Thus, a total of 1,516 on-site spaces for employees, visitors, and patients would remain at the Campus by the year 2023.

Pedestrian Access and Circulation

Improvements to pedestrian access and circulation for the long-term (Phase 2) projects under Alternative 1 would build on and be similar to those implemented for the near-term (Phase 1) projects under Alternative 1.

2.3.2 Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative

Alternative 2 Near-Term Projects

Alternative 2 near-term (Phase 1) project components would be the same as Alternative 1 near-term (Phase 1) project components; thus, all Alternative 2 near-term project components would be located at the SFVAMC Fort Miley Campus. See Table 2-1 for detailed square footage and phasing for near-term project components under Alternative 2. See Figure 2-1 for the Alternative 2 (Phase 1) Footprint and Concept Plan through mid-2015.

Alternative 2 Long-Term Projects

Land Uses

Alternative 2 (Phase 2) long-term project components would primarily involve development of a medical, research, and support space at the existing SFVAMC Fort Miley Campus as well as development of ambulatory care, research, and parking structures at a potential new SFVAMC Mission Bay Campus. For purposes of the EIS analysis, it is assumed that the potential new Campus would be constructed somewhere within an approximately 2.5-square-mile area bounded by Interstate 80 on the north, 2nd Street and San Francisco Bay on the east, Cesar Chavez Street on the south, and 7th/Brannan/Potrero Streets on the west. See Figure 2-3 for the location of the off-site portion of Alternative 2.

It is also assumed that all off-site space in Mission Bay would be four-story, with the proposed off-site new development area totaling approximately 3.56 acres. Note that Alternative 2 (Phase 2) net development at the SFVAMC Fort Miley Campus would result in a reduction of approximately 0.21 acre of developed area in the previously developed areas of the existing 29-acre Campus. Alternative 2 long-term (Phase 2) project components at the Campus would be constructed between late 2015 and early 2023, while the potential new Campus would be constructed roughly between mid-2023 and late 2027. See Tables 2-3 and 2-4 for detailed square footage and phasing for implementation of the long-term (Phase 2) project components of Alternative 2 at the Campus and the potential new Campus. See Figure 2-4 for the Alternative 2 (Phase 2) Footprint and Concept Plan through 2023 on the Campus. The actual footprint and concept plan and site location within Mission Bay has not been determined at this time.

All new development would be designed to achieve LEED[®] Silver certification and would implement the VA SSPP.

In addition to the new development indicated in Tables 2-3 and 2-4, buildings would be retrofitted according to VA seismic design requirements (VA Directive H-18-8), in compliance with Executive Order 12941. Table 2-3 indicates which buildings would be seismically retrofitted on the SFVAMC Fort Miley Campus.

Construction

Implementation of the long-term project components of Alternative 2 at the SFVAMC Fort Miley Campus would involve four subphases of development and retrofitting over approximately 7 years and 7 months, with completion anticipated by April 2023. See Table 2-3 for a detailed schedule and phasing for construction of the long-term (Phase 2) project components of Alternative 2 at the Campus.



Source: AECOM, 2012

Figure 2-3: Location of Off-Site Portion of Alternative 2 for Potential Mission Bay Campus

Table 2-3: Alternative 2 Long-Term (Phase 2) Area, Massing, and Construction Schedule at the SFVAMC Fort Miley Campus (Late 2015 through 2023)¹

Phase	Proposed Action	Gross Square Feet	Net New Gross Square Feet	Number of Stories	Construction Duration ²	Approximate Completion Date ³
Phase 2						
2.1	Operating Room Expansion (D-Wing)	5,300	5,300	1	12 months	October 2016
2.2	IT Support Space Expansion (Building 207)	7,000	7,000	2	18 months	October 2017
2.3	Building 23 (Mental Health Research Expansion)	15,000	15,000	3 (+ basement)	13 months	July 2017
2.4	Building 40 Research and Seismic Retrofit of Buildings 1, 6, and 8 (requires demolition of Buildings 12, 18, 21, and T-23, removal of Building 14)	100,000	42,400	5 (+ basement)	24 months	April 2023 ³
Total Phase 2 Area at the SFVAMC Fort Miley Campus		127,300	69,700	Total Phase 2 Duration	91 months	

Source: VA, 2012

Notes:

¹ This table reflects approximate construction schedules and completion dates.² Construction includes all demolition, grading, structure development, and painting activities associated with the Proposed Action.³ Dates shown represent approximate time frames, as funding has yet to be secured for some project components. Furthermore, because of space restrictions, the ability of VA to construct multiple phase components simultaneously is limited.

Implementation of the long-term project components of Alternative 2 at the potential new SFVAMC Mission Bay Campus would involve four subphases of development over approximately 3 years, with completion anticipated by June 2028. See Table 2-4 for a detailed projected schedule and phasing for construction of the long-term (Phase 2) project components of Alternative 2 at the potential new Campus.

Landscaping and Open Space Areas

Under Alternative 2 long-term projects, landscaping and open space areas at the SFVAMC Fort Miley Campus would be similar to those described for Alternative 1 long-term projects.

Under Alternative 2 long-term projects, the potential new SFVAMC Mission Bay Campus would include landscaping and open space areas. It is unknown at this time where the landscaping and open space areas would be provided. However, it is assumed that there would be some amount of landscaping and open space in close proximity to a potential new Campus.

Utilities Infrastructure Improvements

Under Alternative 2 long-term projects, utilities infrastructure improvements at the SFVAMC Fort Miley Campus would be similar to those described for Alternative 1 long-term projects.

Table 2-4: Alternative 2 Long-Term (Phase 2) Area, Massing, and Construction Schedule at the Potential New SFVAMC Mission Bay Campus (2024–2027)¹

Phase	Proposed Action	Gross Square Feet	Net New Gross Square Feet	Number of Stories	Construction Duration ²	Approximate Completion Date
Phase 2						
2.5	Ambulatory Care Center	150,000	150,000	4	18 months	December 2025
2.6	Clinical Parking Garage (400 spaces)	120,000	120,000	4	12 months	December 2025
2.7	Research Building	200,000	200,000	4	24 months	December 2027
2.8	Research Parking Garage (475 spaces)	150,000	150,000	4	12 months	December 2027
Total Phase 2 Area at the Potential new SFVAMC Mission Bay Campus		620,000	620,000	Total Phase 2 Duration	42 months	

Source: VA, 2012

Notes:

¹ This table reflects approximate construction schedules and completion dates.² Construction includes all demolition, grading, structure development, and painting activities associated with the Proposed Action.³ Dates shown represent approximate time frames, as funding has yet to be secured for project components.⁴ The square footages in this table reflect both the habitable (ambulatory care and research area) and the nonhabitable (parking garage) space planned for construction. This EIS must evaluate the impacts associated with construction of the entire square footage, including nonhabitable space.

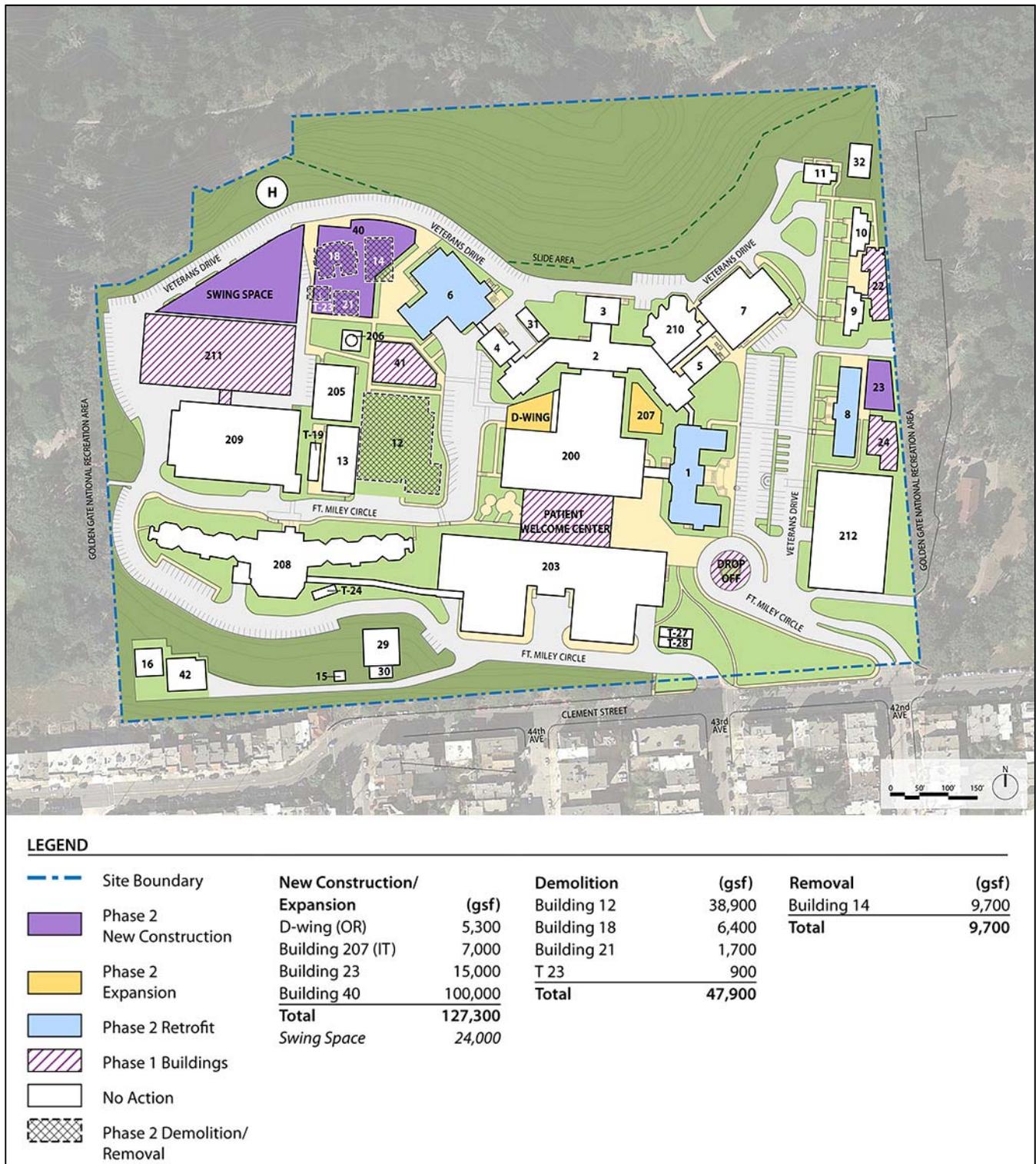
Water

Improvements to the existing water distribution system in the vicinity of a potential new SFVAMC Mission Bay Campus would be required to support the construction and operation of the potential new Campus under this alternative.

Specifically, it is assumed that water system improvements would involve the removal and/or abandonment of existing water mains within proposed building footprints, and the installation of new water mains providing potable water and water for fire hydrants and sprinklers to new buildings. New domestic water service connections would provide potable water to the buildings, and new fire hydrants and fire sprinkler system services would be installed to meet National Fire Protection Association Fire Code requirements.

Sewer and Stormwater

The stormwater collection and conveyance system for the potential new 620,000-square-foot SFVAMC Mission Bay Campus would require improvements to existing and/or construction of new catch basins, manholes, and pipelines in the vicinity of the potential new Campus. Under the LRDP, however, the new facilities would reduce the amount of impervious surface on the site because landscaping and sustainable features, such as green roofs, would be added as part of the building design for the potential new Campus. The use of energy dissipaters to prevent concentrated flows would also minimize the impact of stormwater flows. Site drainage would flow via at-grade catch basins and area drains to landscaped areas, and to underground gravity lines. In addition, the building and site contours would be designed to minimize stormwater runoff. To provide sewer service to a potential new



Source: VA, 2012

Note: The four Phase 2 subphase components identified in Table 2-1 are indicated in this figure.

Figure 2-4:

Alternative 2 (Phase 2) Footprint and Concept Plan through 2023—SFVAMC Fort Miley Campus

Campus under this alternative, new building lateral connections to existing sewer lines would be constructed to connect the potential new Campus to nearby San Francisco Public Utilities Commission combined sewer interceptors.

Electricity and Natural Gas

The construction and operation of a potential new SFVAMC Mission Bay Campus under this alternative would require upgrades to the electrical system upgrades and improvements to the natural gas distribution system in the vicinity of the potential new Campus. Specifically, upgrades to existing feeder lines and other local infrastructure would be required to provide adequate and reliable power to the potential new Campus, and to accommodate future building loads. It is assumed that improvements to the existing natural gas distribution system would involve removing and abandoning existing distribution lines within proposed building footprints and installing new distribution lines to connect the new facilities to PG&E's main gas lines in the Mission Bay area.

Site Access, Circulation, and Parking

Under Alternative 2 long-term projects, site access, circulation, and parking at the SFVAMC Fort Miley Campus would be similar to those described for Alternative 1 long-term projects.

Vehicular Access and Circulation

The construction and operation of a potential new SFVAMC Mission Bay Campus under this alternative may require street improvements to provide vehicular access and internal site circulation. It is unknown at this time where the vehicular access and circulation would be provided.

Parking

Under Phase 2 of Alternative 2, 875 new parking spaces would also be provided at the potential new SFVAMC Mission Bay Campus for employees, visitors, and patients by the year 2027.

Pedestrian Access and Circulation

The construction and operation of a potential new SFVAMC Mission Bay Campus under this alternative would require pedestrian access and circulation. It is unknown at this time how and where pedestrian access and circulation would be provided at the new campus.

2.3.3 Alternative 3: No Action Alternative

Under the No Action Alternative, the LRDP would not be implemented. The purpose of describing and analyzing the No Action Alternative is to allow decision-makers to compare the impacts of the action alternatives with the impacts of not proceeding with a project.

The No Action Alternative would be limited to maintenance and repair of existing SFVAMC Fort Miley Campus facilities, including emergency repairs that would reasonably be expected to occur in the foreseeable future. This alternative would include continued operations despite space, seismic, and parking deficiencies. This alternative

would not meet the needs, purpose, or mission of VA, and is deemed unacceptable. However, in accordance with NEPA practice, it is carried forward as a baseline in the evaluation of potential impacts.

2.4 COMPARISON OF ALTERNATIVES IMPACTS AND MITIGATION

The NEPA process is intended to help public officials make decisions that are based on the understanding of environmental impacts and identify and assess reasonable alternatives to proposed actions to avoid or minimize adverse environmental effects including mitigation. Throughout this NEPA process, VA considered the impacts of their proposed actions on the quality of the human and natural environment.

Table 2-5 presents a summary of environmental impacts that are discussed in detail in Chapter 3, Affected Environment and Environmental Consequences. The table is organized to indicate the level of impact anticipated for each EIS Alternative (including the No Action Alternative) under each environmental topic area and is broken down into near-term and long-term phases. This phased approach ensures that all direct and indirect effects are identified, and options to avoid, minimize, or mitigate those adverse impacts have been considered. Each topic area determination has been made separately for construction and operation periods including the anticipated impact level and corresponding mitigation measure for each alternative, as applicable. Each potential impact is expressed by one of the following significance ratings, ranging from adverse to beneficial:

- Adverse impact
- Minor impact
- No impact
- Beneficial impact

In most cases when an adverse impact was found, mitigation measures have been applied to ensure the impact would be maintained at a minor level. In some cases an adverse impact could not be avoided, and this was primarily because the final location of the project site at the potential new SFVAMC Mission Bay Campus has not been determined and future environmental analysis would be necessary.

In this EIS, the only potential adverse impacts are anticipated for the following:

Alternative 1: SFVAMC Fort Miley Campus

Cultural Resources: Near-term and Long-term Construction: Indirect and Direct Adverse Impacts to Historic Resources (SFVAMC Fort Miley Historic District); and Long-term Construction: Direct Adverse Impact on Archaeological Resources

Alternatives 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative

Air Quality: Long-term Construction and Operation: Adverse Impacts at Mission Bay Campus for localized CO, TAC and PM Emissions

Cultural Resources: Near-term and Long-term Construction: Indirect and Direct Adverse Impacts to Historic Resources (SFVAMC Fort Miley Historic District); Long-term Construction: Direct Adverse Impact potential to

Historic Resources in Mission Bay Campus area; and Long-term Construction: Direct Adverse Impact on Archaeological Resources

Transportation and Parking: Long -term Operation: Direct Adverse Impact to Traffic at Mission Bay Campus

Alternative 3: No Action Alternative

Geology and Soils: Near-term and Long-term Operation: Adverse Impacts for Seismically Induced Ground Shaking and Ground Failure, Seismically Induced Landslides or Slope Failures, or Expansive or Corrosive Soils

Solid and Hazardous Materials: Near-term and Long-term Operation: Adverse Impacts to Hazards and Public Safety

The remainder of the impact determinations under the environmental topics presented in Table 2-5 concluded Minor with Mitigation Incorporated, Minor, or No Impact. Mitigation measures are included in the table next to the impact determination to limit the degree or magnitude of the action or limit the affected environment, when applicable. Best management practices are also incorporated into the project alternatives to limit the potential for an adverse impact.

2.5 REFERENCES

U.S. Department of Veterans Affairs (VA). 2012. *San Francisco Veterans Affairs Medical Center Fort Miley Campus Long Range Development Plan*. San Francisco, CA.

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Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
AESTHETICS			
Near-Term Impacts			
Construction: Visual Character	Minor	Minor	No Impact
Construction: Light	Minor	Minor	No Impact
Operation: Views and Visual Character	Minor	Minor	No Impact
Operation: Light and Glare	Minor	Minor	No Impact
Long-Term Impacts			
Construction: Visual Character	Minor	Minor	No Impact
Construction: Light	Minor	Minor	No Impact
Operation: Views and Visual Character	Minor	Minor	No Impact
Operation: Light and Glare	Minor	Minor	No Impact
AIR QUALITY			
Near-Term Impacts			
Construction: Criteria Air Pollutants	Minor	Minor	No Impact
Construction: Localized TAC and PM Emissions	Minor	Minor	No Impact
Construction: Odors	Minor	Minor	No Impact
<i>Operation: Criteria Air Pollutants</i>	Minor	Minor	No Impact
<i>Operation: Localized CO Emissions</i>	Minor	Minor	No Impact
Operation: Localized TAC and PM Emissions	Minor	Minor	No Impact
Operation: Odors	Minor	Minor	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Long-Term Impacts			
Construction: Criteria Air Pollutants	Minor	Minor	No Impact
Construction: Localized TAC and PM Emissions	Minor	Minor at SFVAMC Fort Miley Campus; Adverse at SFVAMC Mission Bay Campus	No Impact
Construction: Odors	Minor	Minor	No Impact
Operation: Criteria Air Pollutants	Minor	Minor	No Impact
Operation: Localized CO Emissions	Minor	Minor at SFVAMC Fort Miley Campus; Adverse at SFVAMC Mission Bay Campus	No Impact
Operation: Localized TAC and PM Emissions	Minor	Minor at SFVAMC Fort Miley Campus; Adverse at SFVAMC Mission Bay Campus	No Impact
Operation: Odors	Minor	Minor	No Impact
COMMUNITY SERVICES			
Near-Term Impacts			
Construction: Fire Protection Services (Fire and EMS Response Times)	Minor	Minor	No Impact
Construction: Fire Protection Services (Fire Truck Access and Circulation)	Minor	Minor	No Impact
Construction: Law Enforcement Services	Minor	Minor	No Impact
Construction: Parks and Recreation (Park Accessibility)	Minor	Minor	No Impact
Construction: Parks and Recreation (Park Usage)	Minor	Minor	No Impact
Operation: Fire Protection Services (Fire and EMS Response Times)	Minor	Minor	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Operation: Fire Protection Services (Fire Truck Access and Circulation)	Minor	Minor	No Impact
Operation: Fire Protection Services (Water and Fire Flow Systems)	Minor	Minor	No Impact
Operation: Law Enforcement Services	Minor	Minor	No Impact
Operation: Parks and Recreation (Park Accessibility)	Minor	Minor	No Impact
Operation: Parks and Recreation (Park Usage)	Minor	Minor	No Impact
Long-Term Impacts			
Construction: Fire Protection Services (Fire and EMS Response Times)	Minor	Minor	No Impact
Construction: Fire Protection Services (Fire Truck Access and Circulation)	Minor	Minor	No Impact
Construction: Law Enforcement Services	Minor	Minor	No Impact
Construction: Parks and Recreation (Park Accessibility)	Minor	Minor	No Impact
Construction: Parks and Recreation (Park Usage)	Minor	Minor	No Impact
Operation: Fire Protection Services (Fire and EMS Response Times)	Minor	Minor	No Impact
Operation: Fire Protection Services (Fire Truck Access and Circulation)	Minor	Minor	No Impact
Operation: Fire Protection Services (Water and Fire Flow Systems)	Minor	Minor	No Impact
Operation: Law Enforcement Services	Minor	Minor	No Impact
Operation: Parks and Recreation (Park Accessibility)	Minor	Minor	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Operation: Parks and Recreation (Park Usage)	Minor	Minor	No Impact
CULTURAL RESOURCES			
Near-Term Impacts			
Construction: Paleontological Resources	Minor	Minor	No Impact
Construction: Archaeological Resources	Minor with Mitigation	Minor with Mitigation	No Impact
	<p>Mitigation Measure CR-1: Stop Ground-Disturbing Activities in the Vicinity of an Unanticipated Find and Consult with a Qualified Professional Archaeologist.</p>	<p>Mitigation Measure CR-1</p>	
	<p><i>If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, animal bone, bottle glass, ceramics, structure/building remains) or human remains is made during project-related construction activities, ground disturbances in the area of the find will be halted and a qualified professional archaeologist will be notified regarding the discovery. The archaeologist will determine whether the resource is potentially significant as per the NRHP and develop appropriate mitigation. If human remains are encountered, the San Francisco County Coroner will be notified immediately upon their discovery. If the Coroner determines they are of Native American origin, the provisions of NAGPRA will apply.</i></p>		

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Construction: Historic Resources	Adverse Impact with Mitigation (see detail below)	Adverse Impact with Mitigation (see detail below)	No Impact
Construction of Phase 1.1: Historic Resources	No Direct Impact on SFVAMC Historic District; Indirect Adverse Impact on SFVAMC Historic District; No Direct or Indirect Impact on Fort Miley Historic District	No Direct Impact on SFVAMC Historic District; Indirect Adverse Impact on SFVAMC Historic District; No Direct or Indirect Impact on Fort Miley Historic District	No Impact
Construction of Phase 1.2: Historic Resources	No Direct Impact on SFVAMC Historic District; Indirect Adverse Impact on SFVAMC Historic District; No Direct or Indirect Impact on Fort Miley Historic District	No Direct Impact on SFVAMC Historic District; Indirect Adverse Impact on SFVAMC Historic District; No Direct or Indirect Impact on Fort Miley Historic District	No Impact
Construction of Phase 1.3: Historic Resources	Direct Adverse Impact with Mitigation on SFVAMC Historic District; No Indirect Impact on SFVAMC Historic District; No Direct or Indirect Impact on Fort Miley Historic District	Direct Adverse Impact with Mitigation on SFVAMC Historic District; No Indirect Impact on SFVAMC Historic District; No Direct or Indirect Impact on Fort Miley Historic District	No Impact
	<p>Mitigation Measure CR-2: Adhere to the Secretary of the Interior's Standards for the Treatment of Historic Properties (Rehabilitation) to Reduce Impacts on the SFVAMC Historic District</p> <p><i>VA will ensure that any alteration or renovation of buildings that contribute to the SFVAMC Historic District conform to the Secretary of the Interior's Standards for Rehabilitation to minimize any physical alterations to</i></p>	Mitigation Measure CR-2	

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Construction of Phase 1.4: Historic Resources	<p><i>the buildings' structure and appearance that may compromise their integrity and status as an eligible resource. New construction that would alter the setting of the SFVAMC Historic District will also take into account the Secretary's Standards. Treatment or design guidelines for the SFVAMC Historic District may be necessary to ensure that these standards are customized to reflect the historical character of the Historic District. (This mitigation measure will be updated to reflect the consultation with the SHPO and consulting parties taking place under Section 106 of the NHPA.)</i></p>	<p>Direct Beneficial Impact on SFVAMC Historic District; Indirect Adverse Impact with Mitigation on SFVAMC Historic District; No Direct or Indirect Impact on Fort Miley Historic District</p>	No Impact
	Mitigation Measure CR-2	Mitigation Measure CR-2	
Construction of Phase 1.5: Historic Resources	<p>Direct Adverse Impact with Mitigation on SFVAMC Historic District; No Indirect Impact on SFVAMC Historic District; No Direct or Indirect Impact on Fort Miley Historic District</p>	<p>Direct Adverse Impact with Mitigation on SFVAMC Historic District; No Indirect Impact on SFVAMC Historic District; No Direct or Indirect Impact on Fort Miley Historic District</p>	No Impact
	Mitigation Measure CR-2	Mitigation Measure CR-2	

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Operation: Paleontological Resources	No Impact	No Impact	No Impact
Operation: Archaeological Resources	No Impact	No Impact	No Impact
Operation: Historic Resources	No Impact	No Impact	No Impact
Long-Term Impacts			
Construction: Paleontological Resources	Minor	Minor at SFVAMC Fort Miley Campus; Direct Minor Impact and No Indirect Impact at SFVAMC Mission Bay Campus	No Impact
Construction: Archaeological Resources	Minor with Mitigation	Minor with Mitigation	No Impact
	Mitigation Measure CR-1	Mitigation Measure CR-1	
Construction: Historic Resources	Adverse Impact with Mitigation (see detail below)	Adverse Impact with Mitigation at SFVAMC Fort Miley Campus (see detail below); Adverse at SFVAMC Mission Bay Campus	No Impact
Construction of Phase 2.1: Historic Resources	No Impact	No Impact	No Impact
Construction of Phase 2.2: Historic Resources	No Impact	No Impact	No Impact
Construction of Phase 2.3: Historic Resources	Direct Adverse Impact on SFVAMC Historic District; No Indirect Impact on SFVAMC Historic District; No Direct or Indirect Impacts on Fort Miley Historic District	Direct Adverse Impact on SFVAMC Historic District; No Indirect Impact on SFVAMC Historic District; No Direct or Indirect Impacts on Fort Miley Historic District	No Impact
	Mitigation Measure CR-2	Mitigation Measure CR-2	

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Construction of Phase 2.4: Historic Resources	Direct and Indirect Adverse Impact on SFVAMC Historic District; No Direct or Indirect Impacts on Fort Miley Historic District Mitigation Measure CR-2	Direct Adverse Impact on SFVAMC Historic District; No Indirect Impact on SFVAMC Fort Miley District; No Direct or Indirect Impacts on Fort Miley Historic District Mitigation Measure CR-2	No Impact
Construction of Phase 2.5: Historic Resources	No Direct Impact on SFVAMC Historic District; Indirect Adverse Impact on SFVAMC Historic District; No Direct or Indirect Impacts on Fort Miley Historic District Mitigation Measure CR-2	No Direct Impact on SFVAMC Historic District; Indirect Adverse Impact on SFVAMC Historic District; No Direct or Indirect Impacts on Fort Miley Historic District Mitigation Measure CR-2	No Impact
Operation: Paleontological Resources	No Impact	No Impact	No Impact
Operation: Archaeological Resources	No Impact	No Impact	No Impact
Operation: Historic Resources	No Impact	No Impact	No Impact
FLOODPLAINS, WETLANDS, AND COASTAL MANAGEMENT			
Near-Term Impacts			
Construction: Wetlands Alteration	No Impact	No Impact	No Impact
Construction: Degradation of Coastal Resources	Minor	Minor	No Impact
Operation: Flooding as a Result of Location within a Floodplain	No Impact	No Impact	No Impact
Operation: Wetlands Alteration	No Impact	No Impact	No Impact
Operation: Degradation of Coastal Resources	Minor with Mitigation Mitigation Measure HYD-1	Minor with Mitigation Mitigation Measure HYD-1	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Long-Term Impacts			
Construction: Wetlands Alteration	No Impact	Minor	No Impact
Construction: Degradation of Coastal Resources	Minor	Minor	No Impact
Operation: Flooding as a Result of Location within a Floodplain	No Impact	Minor	No Impact
Operation: Wetlands Alteration	No Impact	Minor with Mitigation	No Impact
Mitigation Measure HYD-1			
Operation: Degradation of Coastal Resources	Minor with Mitigation	Minor	No Impact
Mitigation Measure HYD-1			
GEOLOGY AND SOILS			
Near-Term Impacts			
Construction: Erosion and Loss of Topsoil	Minor	Minor	No Impact
Construction: Alteration of Topography	Minor	Minor	No Impact
Operation: Seismically Induced Ground Shaking and Ground Failure	Minor	Minor	Adverse
Operation: Seismically Induced Landslides or Slope Failures	No Impact	No Impact	Adverse
Operation: Expansive or Corrosive Soils	Minor	Minor	Adverse
Long-Term Impacts			
Construction: Erosion and Loss of Topsoil	Minor	Minor	No Impact
Construction: Alteration of Topography	Minor	Minor	No Impact
Operation: Seismically Induced Ground Shaking and Ground Failure	Minor	Minor	Adverse

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Operation: Seismically Induced Landslides or Slope Failures	No Impact	No Impact	Adverse
Operation: Expansive or Corrosive Soils	Minor	Minor	Adverse
GREENHOUSE GAS EMISSIONS			
Near-Term Impacts			
Construction: Greenhouse Gas Emissions	Minor	Minor	No Impact
Operation: Greenhouse Gas Emissions	Minor	Minor	No Impact
Impact of Climate Change on Project	No Impact	No Impact	No Impact
Long-Term Impacts			
Construction: Greenhouse Gas Emissions	Minor	Minor	No Impact
Operation: Greenhouse Gas Emissions	Minor	Minor	No Impact
Impact of Climate Change on Project	No Impact	No Impact at SFVAMC Fort Miley Campus; Minor at SFVAMC Mission Bay Campus	No Impact
HYDROLOGY AND WATER QUALITY			
Near-Term Impacts			
Construction: Water Quality Degradation Caused by Erosion, Sedimentation, or Construction Contaminants	Minor	Minor	No Impact
Construction: Depletion of Groundwater Resources	Minor	Minor	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Operation: Downstream Flooding or Increase in the Frequency or Severity of Combined Sewer Overflow Events as a Result of Altered Drainage Patterns or an Increase in Impervious Surfaces	<p>Minor with Mitigation</p> <p>Mitigation Measure HYD-1: Prepare and Submit Final Drainage Plans and Implement Requirements Contained in Those Plans</p> <p><i>Before the approval of grading plans and building permits, the SFVAMC will submit final drainage plans to SFPUC for all phases demonstrating that off-site up-gradient runoff would be appropriately conveyed through the project site, and that project-related on-site runoff would be appropriately contained to reduce flooding impacts. The plans will include but will not be limited to the following items:</i></p> <ol style="list-style-type: none"> <li><i>1. The SFVAMC will conduct a utility investigation before and during the design phase to ensure proper sizing of combined sewer infrastructure to handle stormwater and wastewater flows. An accurate calculation of preproject and postproject runoff scenarios will be obtained using appropriate engineering methods that accurately evaluate potential</i> 	<p>Minor with Mitigation</p> <p>Mitigation Measure HYD-1</p>	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
	<p><i>changes to runoff, including increased surface runoff. This investigation will estimate stormwater and sanitary sewer peak flows and identify potential conflicts between proposed new buildings and existing sanitary sewer and storm drain pipes.</i></p> <p>2. <i>The system capacity of the separate storm drain system that drains areas to the north of the SFVAMC Fort Miley Campus will be determined as part of a hydrologic and hydraulic analysis of stormwater flows during project design.</i></p> <p><i>Drainage and storm sewer systems will be designed in accordance with VA’s Site Utility Design Manual, which requires that a hydrologic assessment be conducted for the 2-, 5-, 10-, 50- and 100-year storm events, and that the system be sized for a minimum 10-year, 1-hour storm event.</i></p> <p>3. <i>Sustainable stormwater design BMPs, which may include but will</i></p>		

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
	<p><i>not be limited to LID techniques to eliminate stormwater runoff at the point of origination, will be implemented to infiltrate, evaporate, and detain stormwater and achieve predevelopment stormwater runoff conditions at the site after construction. These BMPs may include but will not be limited to the following:</i></p> <ul style="list-style-type: none"> • <i>Bioretention and rain gardens</i> • <i>Rooftop green roof gardens</i> • <i>Sidewalk storage</i> • <i>Vegetated swales, buffers, and strips</i> • <i>Rain barrels and cisterns</i> • <i>Permeable pavement</i> • <i>Soil amendments</i> 		
Operation: Water Quality Degradation Caused by Changes in the Intensity of Land Use and Increases in Impervious Surface	Minor with Mitigation Mitigation Measure HYD-1	Minor with Mitigation Mitigation Measure HYD-1	No Impact
Long-Term Impacts			
Construction: Water Quality Degradation Caused by Erosion, Sedimentation, or Construction Contaminants	Minor	Minor	No Impact
Construction: Depletion of Groundwater Resources	Minor	Minor	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Operation: Downstream Flooding or Increase in the Frequency or Severity of Combined Sewer Overflow Events as a Result of Altered Drainage Patterns or an Increase in Impervious Surfaces	Minor with Mitigation Mitigation Measure HYD-1	Minor with Mitigation Mitigation Measure HYD-1	No Impact
Operation: Water Quality Degradation Caused by Changes in the Intensity of Land Use and Increases in Impervious Surface	Minor with Mitigation Mitigation Measure HYD-1	Minor with Mitigation Mitigation Measure HYD-1	No Impact
LAND USE			
Near-Term Impacts			
Construction	Minor	Minor	No Impact
Operation: Land Uses	Minor	Minor	No Impact
Operation: Plans, Policies, and Ordinances	Minor	Minor	No Impact
Long-Term Impacts			
Construction	Minor	Minor	No Impact
Operation: Land Uses	Minor	Minor	No Impact
Operation: Plans, Policies, and Ordinances	Minor	Minor	No Impact
NOISE			
Near-Term Impacts			
Construction: Noise (On-Site Receptors)	Minor with Mitigation Mitigation Measure NOI-1: Monitor Construction Noise Levels and Implement Additional Noise Attenuating Features <i>VA will monitor exterior noise levels at on-site receptors located closest to a</i>	Minor with Mitigation Mitigation Measures NOI-1 and NOI-2	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
	<p><i>particular construction site for a 24-hour period at the onset of each major phase of construction (e.g., demolition, trenching, structure erection). If noise levels are found to exceed 55 dBA Ldn, VA will implement additional measures to reduce noise levels at affected on-site receptors as a result of construction noise. These may include but are not limited to relocating occupied patient beds to other areas of the SFVAMC Fort Miley Campus, installing temporary acoustic attenuating features, preventing the line of sight between the receptor in question and noise source, and providing in-room noise-cancelling equipment (e.g., white noise).</i></p> <p>Mitigation Measure NOI-2: Employ a Noise Disturbance Coordinator</p> <p><i>VA will manage and monitor noise disturbance during construction activities conducted on-site. The project engineer will be responsible for responding to and addressing complaints received by hospital or clinic staff with respect to construction noise. Contact information will be available in the Engineering Office.</i></p>		
Construction: Noise (Off-Site Receptors)	Minor	Minor	No Impact
Construction: Vibration (On-Site Receptors)	Minor with Mitigation	Minor with Mitigation	

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
	<p>Mitigation Measure NOI-3: Conduct a Preconstruction Survey of Buildings in the Vicinity of Proposed Construction</p>	<p>Mitigation Measures NOI-3 and NOI-4</p>	
	<p><i>The preexisting condition of all buildings within a 50-foot radius will be recorded in the form of a preconstruction survey. The preconstruction survey will determine conditions that exist before construction begins and will be used to evaluate damage caused by construction activities. Fixtures and finishes within a 50-foot radius of construction activities susceptible to damage will be documented (photographically and in writing) before construction. All buildings damaged will be repaired to their preexisting condition.</i></p>		
	<p>Mitigation Measure NOI-4: Monitor Vibration-Sensitive Equipment during Construction</p>		
	<p><i>Vibration levels will be monitored at the nearest interior location of adjacent medical structures containing vibration-sensitive equipment to monitor potential impacts from construction related to this alternative. In the event that measured vibration levels exceed 65 VdB and would disturb the operation of sensitive</i></p>		

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
	<i>medical equipment, additional measures will be implemented to the extent necessary and feasible. These measures include providing notice to equipment operators to coordinate regarding timing of construction activities showing vibration levels above 65 VdB, possibly temporarily relocating the sensitive equipment, and/or installing isolation equipment (i.e., vibration-dampening mounts).</i>		
Construction: Vibration (Off-Site Receptors)	Minor	Minor	No Impact
Operation: Noise (Mobile Source)	Minor	Minor	No Impact
Operation: Noise (Siren Noise)	Minor	Minor	No Impact
Operation: Noise (Stationary Source)	Minor	Minor	No Impact
Operation: Vibration	Minor	Minor	No Impact
Long-Term Impacts			
Construction: Noise	Minor with Mitigation Mitigation Measures NOI-1 and NOI-2	Minor with Mitigation at SFVAMC Fort Miley Campus; Minor with Mitigation at SFVAMC Mission Bay Campus Mitigation Measures NOI-1 and NOI-2	No Impact
Construction: Vibration	Minor with Mitigation Mitigation Measures NOI-3 and NOI-4	Minor with Mitigation Mitigation Measures NOI-3 and NOI-4	No Impact
Operation: Noise (Mobile Source)	Minor	Minor	Minor
Operation: Noise (Siren Noise)	Minor	Minor	Minor

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Operation: Noise (Stationary Source)	Minor	Minor with Mitigation Mitigation Measure NOI-5: Conduct a Site-Specific Noise Study to Inform Design of Stationary Noise Sources for the Potential New SFVAMC Mission Bay Campus <i>VA will retain the services of a qualified acoustical consultant to conduct an additional site-specific noise study to evaluate and establish the appropriate ambient noise levels at the proposed off-site medical research facility for a detailed HVAC and emergency-generator noise reduction analysis. The recommendations of the acoustical consultant will include specific equipment design and operations measures to reduce HVAC and emergency-generator noise to acceptable levels for exterior and interior noise levels as specified in the San Francisco Noise Control Ordinance.</i>	Minor
Operation: Vibration	Minor	Minor	No Impact
SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE			
Near-Term Impacts			
Construction: Induced Employment Growth	Minor	Minor	No Impact
Construction: Displacement of Populations, Residences, and/or Businesses	No Impact	No Impact	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Operation: Induced Population, Housing, or Employment Growth	Minor	Minor	No Impact
Operation: Environmental Justice	No Impact	No Impact	No Impact
Operation: Environmental Health and Safety Risks to Children	Minor	Minor	No Impact
Long-Term Impacts			
Construction: Induced Employment Growth	Minor	Minor	No Impact
Construction: Displacement of Populations, Residences, and/or Businesses	No Impact	No Impact	No Impact
Operation: Induced Population, Housing, or Employment Growth	Minor	Minor	No Impact
Operation: Environmental Justice	No Impact	No Impact at SFVAMC Fort Miley Campus; Minor at SFVAMC Mission Bay Campus	No Impact
Operation: Environmental Health and Safety Risks to Children	Minor	Minor at SFVAMC Fort Miley Campus; Minor at SFVAMC Mission Bay Campus	No Impact
SOLID AND HAZARDOUS MATERIALS			
Near-Term Impacts			
Construction: Solid Waste Generation	Minor	Minor	No Impact
Construction: Hazardous Materials Exposure	Minor	Minor	No Impact
Construction: Hazards and Public Safety	Minor	Minor	No Impact
Operation: Solid Waste Generation	Minor	Minor	No Impact
Operation: Hazardous Waste Generation	Minor	Minor	No Impact
Operation: Hazards and Public Safety	Minor	Minor	Adverse

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Long-Term Impacts			
Construction: Solid Waste Generation	Minor	Minor	No Impact
Construction: Hazardous Materials Exposure	Minor	Minor	No Impact
Construction: Hazards and Public Safety	Minor	Minor	No Impact
Operation: Solid Waste Generation	Minor	Minor	No Impact
Operation: Hazardous Waste Generation	Minor	Minor	No Impact
Operation: Hazards and Public Safety	Minor	Minor	Adverse
TRANSPORTATION AND PARKING			
Near-Term Impacts			
Construction: Traffic	Minor	Minor	No Impact
Construction: Parking	Minor	Minor	No Impact
Operation: Traffic	Minor	Minor	Minor
Operation: Transit	Minor	Minor	No Impact
Operation: Pedestrian	Minor	Minor	No Impact
Operation: Bicycle	Minor	Minor	No Impact
Operation: Parking	Minor	Minor	No Impact
Operation: Loading	No Impact	No Impact	No Impact
Operation: Site Access and Circulation	Minor	Minor	No Impact
Long-Term Impacts			
Construction: Traffic	Minor	Minor	No Impact
Construction: Parking	Minor	Minor	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Operation: Traffic	Minor	Minor at SFVAMC Fort Miley Campus; Adverse at SFVAMC Mission Bay Campus	Minor
Operation: Transit	Minor	Minor	No Impact
Operation: Pedestrian	Minor	Minor	No Impact
Operation: Bicycle	Minor	Minor	No Impact
Operation: Parking	Minor	Minor	No Impact
Operation: Loading	No Impact	Minor	No Impact
Operation: Site Access and Circulation	Minor	Minor	No Impact
UTILITIES			
Near-Term Impacts			
Construction: Utility Service Systems	Minor	Minor	No Impact
Construction: Fire Suppression System	No Impact	No Impact	No Impact
Construction: Stormwater Drainage	No Impact	No Impact	No Impact
Operation: Water Supply	Minor	Minor	No Impact
Operation: Wastewater and Stormwater	Minor	Minor	No Impact
Operation: Electricity and Natural Gas	Minor	Minor	No Impact
Long-Term Impacts			
Construction: Utility Service Systems	Minor	Minor	No Impact
Construction: Fire Suppression System	No Impact	No Impact	No Impact
Construction: Stormwater Drainage	No Impact	No Impact	No Impact
Operation: Water Supply	Minor	Minor	No Impact
Operation: Wastewater and Stormwater	Minor	Minor	No Impact
Operation: Electricity and Natural Gas	Minor	Minor	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
WILDLIFE AND HABITAT			
Near-Term Impacts			
Construction: Vegetation/Habitat	No Impact	No Impact	No Impact
Construction: Federally Listed Plant Species	No Impact	No Impact	No Impact
Construction: Federally Listed Wildlife Species	No Impact	No Impact	No Impact
Construction: Other Species of Special Regional Concern	Minor with Mitigation	Minor with Mitigation	No Impact
	<p>Mitigation Measure WH-1: Conduct Wildlife Surveys and Avoid the Breeding Season for Nesting Birds and Bats</p>	<p>Mitigation Measure WH-1</p>	
	<p><i>SFVAMC will implement the following measures to avoid potential effects on nesting birds and bats, should potential nesting or roosting habitat be identified within 150 feet of the proposed development area:</i></p>		
	<ul style="list-style-type: none"> • <i>Removal of shrubs, trees, or any vegetative cover will be conducted outside of the breeding season, roughly from September to January 31 (breeding season is typically February through August).</i> • <i>Should vegetation removal be required during the breeding season (approximately March through August), a qualified biologist will conduct a survey for native nesting birds and bats no</i> 		

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
	<p><i>earlier than 14 days before the removal of trees, shrubs, or buildings. The biologist will determine the time period that the results will remain valid, based on the seasonal timing. The area surveyed will include all locations of vegetation or building removal, as well as areas within 150 feet.</i></p> <ul style="list-style-type: none"> <i>If no active nests or roosts are found, no further action is required. If an active nest or roost is discovered in the areas to be cleared, or in other habitats within 150 feet of construction boundaries, clearing and construction will be postponed for at least 2 weeks or until a wildlife biologist has determined that the young have left the nest or roost, the nest or roost is vacated, and there is no evidence of second nesting attempts.</i> 		
Construction: Habitat Linkages and Corridors	No Impact	No Impact	No Impact
Operation: Vegetation/Habitat	No Impact	No Impact	No Impact
Operation: Federally Listed Plant Species	No Impact	No Impact	No Impact
Operation: Federally Listed Wildlife Species	No Impact	No Impact	No Impact
Operation: Other Species of Special Regional Concern	No Impact	No Impact	No Impact
Operation: Habitat Linkages and Corridors	No Impact	No Impact	No Impact

Table 2-5: Summary of Environmental Impacts and Mitigation Measures

Impact	Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative	Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative	Alternative 3: No Action Alternative
Long-Term Impacts			
Construction: Vegetation/Habitat	No Impact	No Impact	No Impact
Construction: Federally Listed Plant Species	No Impact	No Impact	No Impact
Construction: Federally Listed Wildlife Species	No Impact	No Impact	No Impact
Construction: Other Species of Special Regional Concern	Minor with Mitigation Mitigation Measure WH-1	Minor with Mitigation Mitigation Measure WH-1	No Impact
Construction: Habitat Linkages and Corridors	No Impact	No Impact	No Impact
Operation: Vegetation/Habitat	No Impact	No Impact	No Impact
Operation: Federally Listed Plant Species	No Impact	No Impact	No Impact
Operation: Federally Listed Wildlife Species	No Impact	No Impact	No Impact
Operation: Other Species of Special Regional Concern	No Impact	No Impact	No Impact
Operation: Habitat Linkages and Corridors	No Impact	No Impact	No Impact