# Environmental Assessment (EA)/Initial Study (IS)

FOR

# South Boundary Road/Gigling Road Improvement Project

## Volume I of II

**Prepared For:**

**Fort Ord Reuse Authority (FORA)**
100 12th Street, Bldg. 2880
Marina, CA 93933
Contact: James Arnold
Tel: (831) 883-3672

**Prepared by:**

585 Cannery Row, Suite 304
Monterey, CA 93940
Tel: (831) 644-9174

**Creegan and D'Angelo Consulting Engineers**
225 H Cannery Row
Monterey, CA 93940
Tel: (831) 373-1333

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# Summary and Conclusions

# SUMMARY AND CONCLUSIONS

## Proposed Action/Project

This Environmental Assessment/Initial Study (EA/IS) has been prepared to assess the environmental impacts associated with the roadway widening and associated improvements of approximately 12,476 linear feet (2.36 miles) right-of-way along South Boundary Road and Gigling Road on the former Fort Ord Army Base. The scope of the project includes roadway improvements, intersections, sidewalks, bicycle paths/lanes, water and recycled water transmission lines, wastewater gravity and force main pipelines, gas lines, electric lines, cable television and communication facilities, and street lighting. For the purpose of environmental review, proposed intersections and roadway connections were included in this analysis of the proposed action/project, although these improvements may be constructed at a later date.

The roadway and associated improvements are proposed by the Fort Ord Reuse Authority (FORA) for South Boundary and Gigling Roads (hereinafter "proposed action/project"). The purpose of the proposed action/project is to: 1) provide adequate roadway capacity to mitigate future traffic volumes resulting from the buildout of the Fort Ord Reuse Plan; and 2) upgrade the roadways to current safety and design standards and improve the present level of service (LOS).

This EA/IS has been prepared pursuant to the National Environmental Policy Act (NEPA), the regulations of the Federal Council on Environmental Quality (40 CFR, Part 1500 et seq.), the Department of the Army (Army Regulation [AR] 200-2), and the California Environmental Quality Act (CEQA).

### South Boundary Road

The proposed action/project involves improving and realigning the South Boundary Road/General Jim Moore Boulevard Intersection to approximately 300 feet north of the existing intersection and continuing for approximately 600 feet eastward, where the realignment meets up with the existing alignment to continue on for an additional 7,050 linear feet, for a total of approximately 7,593 linear feet (1.44 miles). Realignment would be from a point approximately 300 feet north of the existing South Boundary Road/General Jim Moore Boulevard intersection extending 600 feet eastward, for a total realignment length of 600 linear feet. The existing roadway would be improved from this point to approximately 200 linear feet east of Rancho Saucito. South Boundary Road would be improved as a 2-lane arterial roadway with median and left turn channelization, and 8-foot wide shoulders. The proposed roadway will include the construction of a new intersection at proposed South Boundary Road/General Jim Moore Boulevard intersection. South Boundary Road is located within the City of Del Rey Oaks Sphere of Influence and proposed annexation area.

### Gigling Road

The proposed action/project involves improving Gigling Road along its current alignment starting at the intersection with General Jim Moore Boulevard and continuing east for approximately 4,883 linear feet (0.92 miles). The roadway is an east-west facility in the central part of the former Fort Ord, aligned south of Lightfighter Drive. It connects with several north-south streets, including General Jim Moore Boulevard, which provides access to Lightfighter Drive and the Main Gate. The roadway would be improved as a 4-lane collector roadway with 18-foot wide median and an 8-foot wide bike path on the southern side of the roadway. Roadway improvements include the installation of curbs and gutters, and 5-foot wide sidewalks on each side of the roadway. These improvements are consistent with the improvements anticipated in the *Fort Ord Reuse Plan*. Gigling Road is located within the City of Seaside's city limits.

## Alternatives Considered

Alternatives to the proposed action/project are limited as the proposed action/project is the result of necessary roadway improvements identified in the *Fort Ord Reuse Plan-Capital Improvement Program Fiscal Year 2006-2007 through 2021/2022 (CIP)* dated June 2006. Three alternatives were considered for the proposed action/project. The **No Action Alternative**, and **Alternative 2-Revised Project Design**.

Under the **No-Action Alternative**, all of the project roadway segments would remain in their current condition and alignment without the proposed improvements. Under this alternative, the project roadways would be subject to increasing congestion as development occurs in accordance with the *Fort Ord Reuse Plan* and would not meet current safety standards, including adequate intersections, turning lanes, shoulder width, and bicycle lanes. The increased congestion could result increased noise levels. The No Action Alternative would not meet the project objective of improving the roadways consistent with the circulation plans of the *Fort Ord Reuse Plan-CIP,* the *Del Rey Oaks General Plan*, and the *Seaside General Plan*.

Under **Alternative 2-Revised Project Design**, South Boundary Road would be upgraded to a 2-lane arterial along the existing alignment to York Road, which would increase the total improvement area by approximately 1,650 feet (0.30 miles); the existing South Boundary Road/General Jim Moore intersection would remain in place; and a new South Boundary Road/York Road intersection would be required. Gigling Road would be upgraded as new 4-lane arterial between General Jim Moore Boulevard and the proposed Eastside Road, which would increase the total improvement area by approximately 875 feet longer (0.17 miles). The effects to biological resources, soil, water quality, noise and air quality would be slightly increased within the Gigling Road improvement area due to more area of disturbance. South Boundary Road may be subject to increasing congestion as development occurs within the City of Del Rey Oaks since the roadway would no longer provide direct access to the City of Del Rey Oaks property, which is anticipated to generate substantial trips. In addition, additional trips to and from State Route 68 would likely be redistributed to York Road and South Boundary Road. This may cause additional

congestion on these roadways which could result in additional traffic and noise impacts. The **Alternative 2-Revised Project Design** would result in greater impacts to biological resources, soil, water quality, air quality and noise.

## Environmental Consequences and Mitigations

This EA/IS contains an analysis of effects of the proposed action/project for the following topic areas: aesthetics, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use/planning, noise, transportation/circulation, and utilities and service systems. No significant environmental effects are anticipated to agricultural resources, mineral resources, public services, recreation, population and housing, land use and planning, recreation, and utilities and service systems. The potentially significant impacts of the proposed action/project are summarized below:

**Aesthetics.** Construction of the proposed action/project has the potential to alter the aesthetic character quality of the project area and create a new source of light (streetlights), which could increase skyglow and negatively affect nighttime views in the area. Implementation of mitigation measures incorporated herein would reduce aesthetics and visual impact to a less than significant level.

**Air Quality.** Construction of the proposed action/project may generate significant airborne dust and diesel exhaust from the operation of construction equipment. Mitigation measures are incorporated herein, which would reduce potential dust and diesel exhaust emissions generated by the proposed action/project to a less than significant level.

**Biological Resources.** The proposed action/project would affect native vegetation and trees, including sensitive plant species, during construction activities in currently undeveloped areas. Mitigation measures are incorporated herein, which would reduce impacts to biological resources to a less than significant level.

**Cultural Resources.** Although not anticipated, impacts to previously undiscovered archaeological resources may occur as a result of grading and excavation activities. Mitigation measures are incorporated herein, which would reduce impacts to archaeological and historic resources to a less than significant level.

**Geology and Soils.** During site preparation and construction activities associated with the proposed action/project, there is potential for erosion and subsequent sedimentation into surrounding sensitive areas. Mitigation measures are incorporated herein that would reduce the potential for erosion and subsequent sedimentation to occur, which would reduce the potential impact to a less than significant level.

**Hydrology and Water Quality.** Construction of the proposed action/project may result in short-term water quality impacts from erosion. Mitigation measures are incorporated herein that would reduce temporary erosion to a less than significant level.

**Hazards and Hazardous Materials.** The project area is located in an area considered hazardous and containing munitions of concern (MEC). The proposed action/project is not located in an area where hazardous wastes have been identified. Due to the presence of MEC and the potential for loss of life or injury due to accidental or purposeful contact with ordinance or explosives, mitigation measures are prescribed herein.

**Noise.** The proposed action/project has the potential to result in short and long-term increases in the noise levels within the project area with implementation of the proposed action/project. Construction noise represents a short-term impact on ambient noise levels in and around the project area. In addition, cumulative traffic in the project area may result in an increase in noise levels of greater than five dB $L_{dn}$ at sensitive receptors in the project area. Mitigation measures are prescribed herein.

**Transportation/Circulation.** The proposed action/project is a roadway improvement project that would implement identified necessary improvements to accommodate anticipated growth associated with buildout of the *BRP* and accommodate alternate modes of transportation. Therefore, the proposed action/project would result in a beneficial impact to transportation and circulation.

## Conclusions

Based on the information in the EA/IS, the proposed action/project does not constitute a major state or federal action that could significantly affect the environment and will not necessitate preparation and distribution of an Environmental Impact Statement or Environmental Impact Report. Therefore, a Finding of No Significant Impact (FONSI)/Mitigated Negative Declaration (MND) has been prepared.

# Chapter 1

# Purpose and Need for the Proposed Action/Project

# CHAPTER 1: PURPOSE AND NEED FOR THE PROPOSED ACTION/PROJECT

## EA / IS Study Requirement

This Environmental Assessment/Initial Study (EA/IS) has been prepared to assess the predicted environmental impacts associated with the South Boundary Road and Gigling Road Improvement project (hereinafter "proposed action/project"), which is located on the former Fort Ord Army Base in Monterey County. The proposed action/project involves improving and realigning South Boundary Road from the existing South Boundary Road/General Jim Moore Boulevard intersection to approximately 300 feet north on General Jim Moore Boulevard. The realigned portion (approximately 600 linear feet) of South Boundary Road would be improved as four-lane arterial and the existing South Boundary Road (approximately 7,050 linear feet) would be improved as a two-lane arterial roadway. The improvements would include installation of medians, left turn channelization, shoulders/bike lands, curb, gutter, sidewalks on both sides of the street, and six transit stations along the entire 7,593 linear feet (1.44 miles). Gigling Road would be improved as a four-lane collector roadway along its current alignment from General Jim Moore Boulevard eastward for approximately 4,883 linear feet (0.92 miles) towards 7th Avenue. The proposed Gigling Road improvements would include medians, street lights, landscaping, curb, gutter, bike path, and sidewalk.

This EA/IS has been prepared pursuant to the National Environmental Policy Act (NEPA), the regulations of the Federal Council on Environmental Quality (40 CFR, Part 1500 et seq.), the Department of the Army (Army Regulation [AR] 200-2), and the California Environmental Quality Act (CEQA).

The purpose of this EA/IS is to determine whether the proposed action/project constitutes a major federal/state action that could significantly affect the environment, requiring the preparation and distribution of an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for public review. If it is determined that this action would not significantly affect the environment after incorporation of mitigation measures, a Finding of No Significant Impact (FONSI)/Mitigated Negative Declaration (MND) will be prepared and issued. The proposed Mitigated Negative Declaration and Finding of No Significant Impact are included in **Appendix H**.

This EA/IS is based on a combination of an environmental checklist, preliminary design reports, technical studies, engineering analysis and existing environmental documents. All references for this document are listed in the bibliography in Chapter 8. The environmental checklist is attached as **Appendix A**.

## Agency and Public Participation

In compliance with 40 C.F.R. 1501.4(b) and Section 15073 of the California Environmental Quality Act, this EA/IS will be distributed to the State Clearinghouse and local agencies and organizations listed in Chapter 9 of this EA/IS.

## Regulatory Requirements, Permits & Approvals

The proposed action/project is located on land that was formerly owned entirely by the United States Department of the Army. Portions of Gigling Road are still owned by the Army; however, some of the right-of-way has been transferred to the City of Seaside. Most of the South Boundary Road right-of-way has been transferred to the City of Del Rey Oaks and the City of Monterey. Portions of both roadways are owned by FORA and are in various stages of the land transfer process (i.e. Finding of Suitable to Transfer (FOST)/Finding of Suitable to Environmentally Treatment (FOSET)). Some portions of the right-of-way would eventually be transferred to the cities of Seaside, City of Monterey, and the County of Monterey.

The proposed action/project requires an Encroachment Permit (or Right of Entry) for work on federal land. As the Lead Agency, the U.S. Department of the Army is the ultimate issuer of the needed Encroachment or Right of Entry permit. Encroachment and Right of Entry Permits would not be required in the event the property had been transferred to the City of Seaside, City of Del Rey Oaks, and County of Monterey prior to construction. However, additional limitations that have not yet been implemented may apply as a condition of transference. The following agency permits would be required to satisfy federal, state, and local concerns:

1. **U.S. Department of the Army.** Approval by the Army of an EA/FONSI is required under NEPA, and issuance of a Right of Entry to conduct the proposed work following remediation of the unexploded ordinance to the satisfaction of the U.S. Department of the Army.

2. **Regional Water Quality Control Board.** A National Pollutant Discharge Elimination System (NPDES) General Construction Permit for short-term grading activities on more than one acre may be required.

3. **U.S. Fish and Wildlife Service/California Department of Fish and Game.** Basewide incidental take permits from the USFWS and CDFG under Section 10(a)(1)(B) of the federal ESA and Section 2081 of the California ESA.

4. **City of Seaside, City of Del Rey Oaks, City of Monterey.** Compliance with the Covenants to Restrict Use of Property (CRUPs), local jurisdictions' ordinances, and tree removal permits.

## Purpose and Need for the Proposed Action/Project

The proposed roadway improvements are identified in the *Fort Ord Reuse Plan* (1997) (*BRP*) and reflect the planned roadway configurations in the *Fort Ord Reuse Plan's – Capital Improvement Program (CIP)* (Projects F04 and F07), the Transportation Agency of Monterey County's (TAMC) *2005 Regional Transportation Plan* (Projects MY095, FRA018, and FRA027), *City of Del Rey Oaks General Plan* (Page 38, Policy C-11, and Programs 15, 16, and 17), *City of Monterey General Plan* (Policies c.13.2 and c.15) and the *City of Seaside General Plan* (Implementation Plan C-1.4.1: Planned Improvement B6). The proposed action/project is part of a larger series of traffic improvements required to implement the *BRP*, which were developed to provide an adequate transportation system to serve planned uses on the former Fort Ord Army Base and mitigate the potential impacts of increased traffic associated with those uses. One of the objectives of the proposed action/project is to provide for adequate transportation service levels to accommodate planned development in the vicinity through 2015, and ultimately through 2030. Under existing conditions, South Boundary Road and Gigling Road do not accommodate bicycle lanes, adequate shoulders, or turning lanes. Therefore, a second objective of the proposed action/project would be to bring roadway segments up to current safety standards, and provide sidewalks and bicycle lanes.

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# Chapter 2

# Description of Proposed Action/Project

# CHAPTER 2: DESCRIPTION OF PROPOSED ACTION/PROJECT

## Project Background

Fort Ord is a former U.S. Army infantry base located in Monterey County approximately five miles northeast of the City of Monterey (see **Figure 2-1, Regional Location** and **Figure 2-2, Vicinity Map**). The former Army base once had a population of approximately 35,000 military personnel and encompasses nearly 28,000 acres of land that is surrounded by the cities of Marina, Monterey, Del Rey Oaks, Seaside, and Sand City, and unincorporated lands of Monterey County.

In 1994, the Fort Ord Reuse Authority (FORA) was established to coordinate the redevelopment of Fort Ord for civilian residential, commercial, recreational, and educational uses at a civilian intensity equivalent to the military population of the former base. The FORA Board certified the *Fort Ord Reuse Plan EIR* and adopted the Base Reuse Plan (*BRP)* on June 13, 1997. Prior to adopting the *BRP*, the U.S. Army Corps of Engineers prepared the *Fort Ord Disposal and Reuse Final Environmental Impact Statement* (1993) and the *Fort Ord Disposal and Reuse Supplemental Environmental Impact Statement*.

The proposed improvements were identified as a part of FORA's *BRP - Capital Improvement Program (CIP)* approved in June 2006 (which is reviewed and revised annually) and in the Transportation Agency of Monterey County (TAMC)'s *Regional Transportation Plan (RTP)* prepared in 2005. The proposed improvements are included in the CIP and RTP as an upgrade to the current configuration, which consists of an unimproved 2-lane rural road with minimal shoulders, and a 2-lane arterial with left-turn channelization and continuous shoulders.

### South Boundary Road

South Boundary Road is a 2-lane roadway with no curb, gutter, or sidewalks and is located within Fort Ord Reuse Authority area of the Cities of Del Rey Oaks and Monterey and Monterey County. South Boundary Road begins just north of State Route 218 at General Jim Moore Boulevard, which is identified as the major north-south roadway through the southern part of the former Fort Ord. South Boundary Road progresses southeast along the southern boundary of Fort Ord, traveling north of State Route 218 and ending at State Route 68 approximately five linear miles from its intersection with General Jim Moore Boulevard. The roadway provides an alternate route to State Routes 68 and 218 between the Ryan Ranch Business Park and communities on the Monterey Peninsula. South Boundary Road is gated off just east of Rancho Saucito Lane and is only open to the public during events at the Mazda Raceway at Laguna Seca. There are stop-sign controlled intersections at General Jim Moore Boulevard and Rancho Saucito Lane.

### Gigling Road

Gigling Road is a 2-lane roadway that has curbs gutters, and sidewalks on both sides of the street and is located within the Fort Ord Reuse Authority Area of the City of Seaside.

Gigling Road as an east-west facility in the central part of the former Fort Ord aligned south of Lightfighter Drive. It connects with several north-south streets, including General Jim Moore Boulevard, which provides access to Lightfighter Drive and the Main Gate. The Gigling Road begins approximately 0.6 miles west of General Jim Moore Boulevard when Noumea Road turns into Gigling Road, intersects with General Jim Moore Boulevard and progresses east away from the City of Seaside into development areas of Monterey County. The roadway serves as the major roadway serving the Parker Flats area immediately south of the California State University – Monterey Bay (CSUMB) campus. The intersection of Gigling Road/General Jim Moore Boulevard is signal controlled. The Gigling Road/6th Avenue intersection is stop sign controlled in all directions.

## Project Elements

These roadway improvements are planned as part of a larger series of transportation improvements required to implement the circulation elements of the BRP-CIP and to mitigate the impacts of the development of proposed future uses. The proposed roadway improvements are intended to implement the BRP transportation network and provide acceptable service levels based on traffic generation estimates for buildout through 2030. The South Boundary Road improvement area is located within the cities of Del Rey Oaks, and Monterey, and Monterey County; and the Gigling Road improvement area is located within the City of Seaside, as shown in **Figure 2-2, Vicinity Map**. The following description of the proposed action/project is based on the Preliminary Plans prepared by Creegan and D'Angelo Consulting Engineers in January 2008 (Gigling Road) and June 2009 (South Boundary Road).

### South Boundary Road Improvement Area

The proposed action/project involves improving the existing South Boundary Road within the Fort Ord Reuse Authority area of the cities of Del Rey Oaks and Monterey. The South Boundary Road improvements include relocating the existing South Boundary Road/General Jim Moore Boulevard intersection approximately 300 feet north of the existing intersection location and realigning a portion of South Boundary Road approximately 600 linear feet eastward from the realigned intersection. This realigned portion of South Boundary Road would be improved as 4-lane arterial and would join the existing South Boundary Road alignment. The existing South Boundary Road would be improved as a 2-lane arterial roadway approximately 7,050 linear feet eastward. The new South Boundary Road (as realigned) would have a total length of approximately 7,593 linear feet (1.44 miles). Approximately 6,433 linear feet of the improvement would be located within the City of Del Rey Oaks and approximately 1,160 linear feet would be within the City of Monterey. The proposed roadway improvements would disturb approximately 19.5 acres. Improvements would include the construction of a 16-foot striped median for a minimum 80-foot right-of-way, and would include the installation of streetlights, and sidewalk improvements. South Boundary Road improvements are shown in **Figure 2-3** and in project plans included in **Appendix B**. Implementation of these improvements may be phased due to funding availability, obtaining basewide incidental take permits from the USFWS and CDFG under Section 10(a)(1)(B) of the federal ESA and Section 2081 of the California ESA.

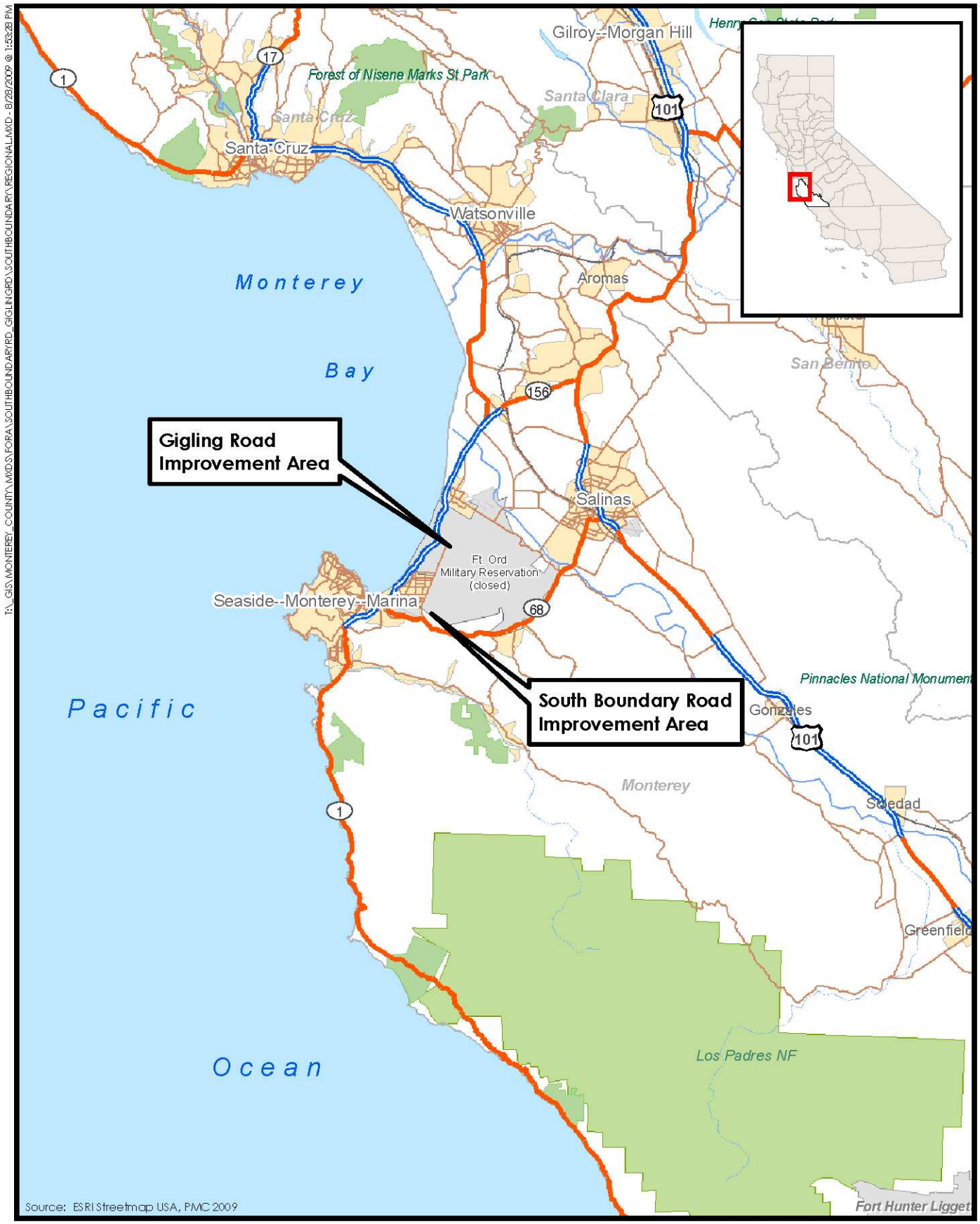


**Figure 2-1**
Regional Location Map

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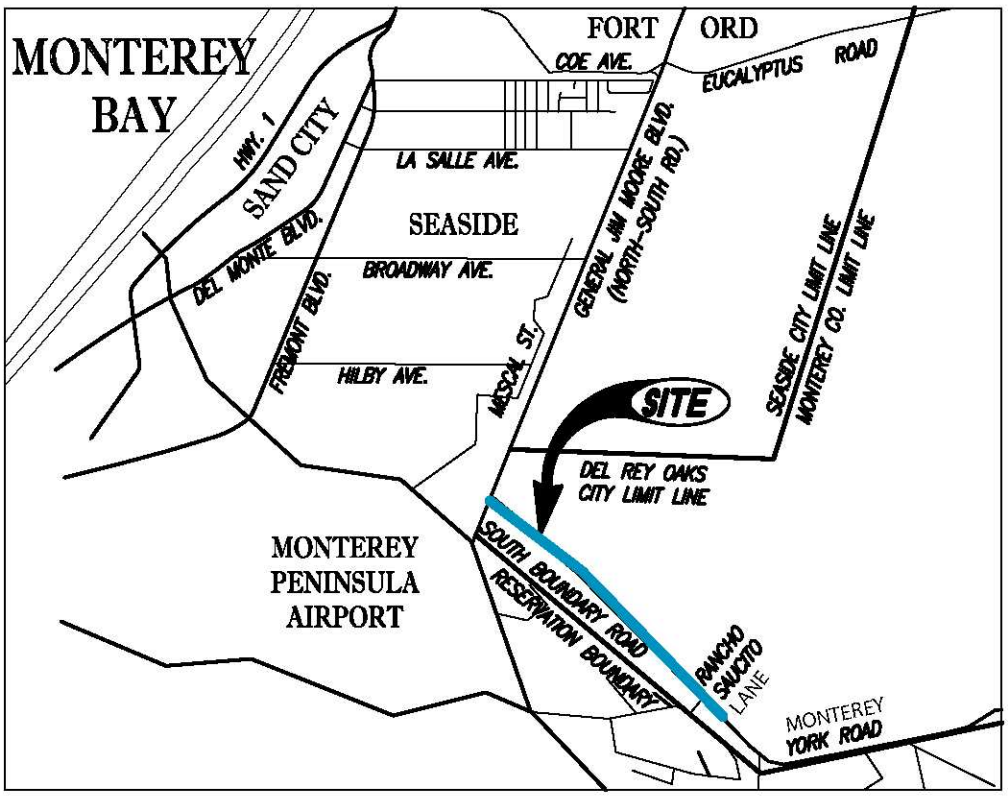
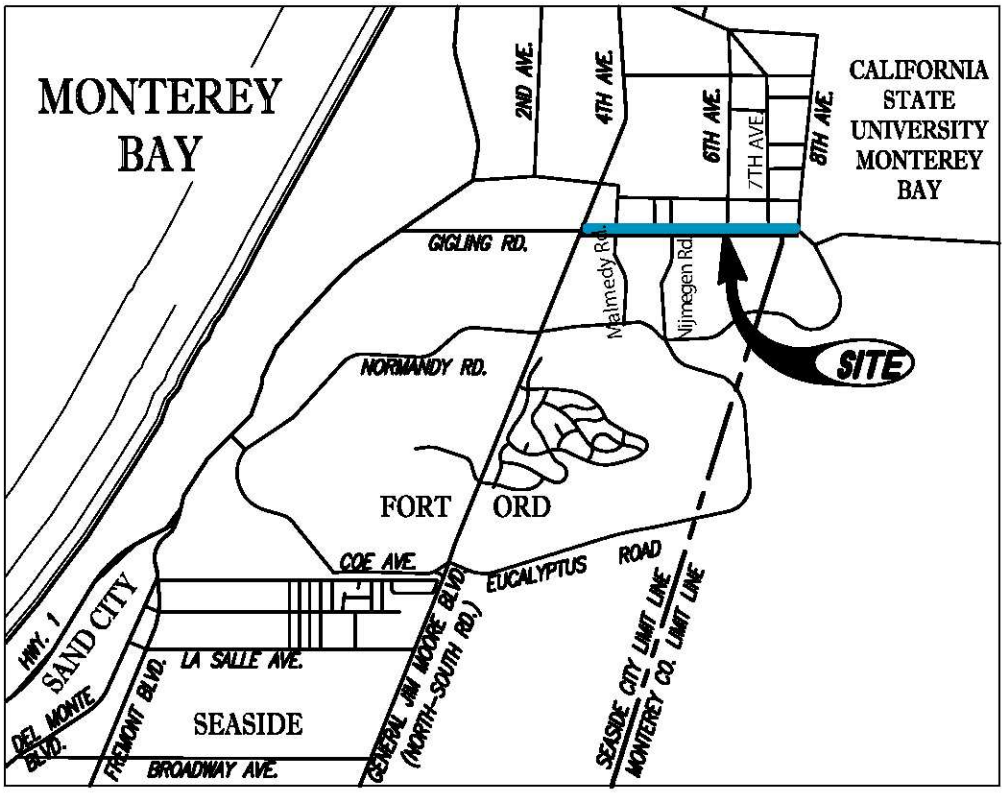
South Boundary Road Improvement Area




Gigling Road Improvement Area




Source: Creegan + D'Angelo 2007, PMC 2009

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**Figure 2-2**
Vicinity Map

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### Gigling Road Improvement Area

The proposed action/project involves improving Gigling Road approximately 4,883 linear feet (0.92 miles) along its current alignment between General Jim Moore Boulevard and approximately 7th Avenue. This improvement area is located within the Fort Ord Reuse Area of the City of Seaside.

Approximately 4,883 linear feet (0.92 miles) of the roadway would be improved as a 4-lane urban arterial between General Jim Moore Boulevard and 7th Avenue. The proposed roadway improvements would disturb approximately 15.7 acres. Improvements would include construction of a 4-lane collector with an 18-foot median for a 115-foot minimum right-of-way and would include the installation of streetlights, bikeway, and sidewalks. Gigling Road improvements are shown in **Figure 2-3** and in project plans included in **Appendix B.**

Anticipated future improvements would extend Gigling Road east of 7th Avenue to intersect with Eastside Parkway. However, these improvements are not yet designed and would be subject to subsequent environmental review once the design is completed.

### Bicycle and Pedestrian Facilities

The proposed action/project includes 5-foot wide sidewalks along the length of the proposed Gigling Road area improvements. A 5-foot wide sidewalk and an 8-foot wide bike path would be constructed along the south side of Gigling Road and a 5-foot wide sidewalk would be constructed along the north side. Five-foot sidewalks are proposed on both sides of South Boundary Road, with 8-foot shoulders/bike lanes. The bike lanes would form an important link in the integrated system of bicycle routes set forth in the BRP.

### Transit

Six (6) transit stops (three in each direction) would be constructed within the South Boundary Road improvement area. All transit stops would include an 80-foot taper, a 50-foot transit stop, a 140-foot acceleration lane, and a 100-foot taper. The transit stops would be located eastbound and westbound as follows:

1) An eastbound stop located approximately 600 feet southeast of the proposed South Boundary Road /General Jim Moore Boulevard intersection; and
2) A westbound stop located approximately 800 feet southeast of the proposed South Boundary Road /General Jim Moore Boulevard intersection; and
3) An eastbound stop located approximately 200 feet southeast of the proposed South Boundary Road /Southwest Access intersection; and
4) A westbound stop located approximately 300 feet southeast of the proposed South Boundary Road /Southwest Access intersection; and
5) An eastbound stop located approximately 100 feet northwest of the proposed South Boundary Road /Resort Loop Road West intersection; and
6) A westbound stop located approximately 300 feet northwest of the proposed South Boundary Road /Resort Loop Road West intersection.

### Grading

In previously unpaved areas, the proposed action/project would involve clearing of vegetation and grading at the realigned South Boundary Road/General Jim Moore Boulevard intersection and where the realigned South Boundary Road joins the existing alignment, which is approximately 600 linear feet east of General Jim Moore Boulevard. Native soil would be removed and replaced with aggregate base prior to paving.

Approximately 19.5 acres would be disturbed by the proposed improvements along South Boundary Road, which would result in the export of approximately 2,200 cubic yards ($yd^3$) of soil (21,500 $yd^3$ of cut, 19,300 $yd^3$ of fill). Approximately 15.7 acres would be disturbed by the proposed improvements along Gigling Road, which would result in the import of approximately 11,100 $yd^3$ of soil (19,000 $yd^3$ of cut, 30,100 $yd^3$ of fill).

### Tree and Vegetation Removal

Implementation of the proposed action/project would result in tree and vegetation removal within the project footprint (proposed rights-of-way) and may disturb trees and vegetation within a 20-foot buffer or Temporary Construction Zone (TCZ) surrounding the project footprint. Based on field surveys conducted by PMC, the proposed action/project would result in the removal of approximately 13.3 acres of Maritime Chaparral, and 5.1 acres of Coast Live Oak woodland. In addition, the proposed action/project would result in a direct loss of approximately 0.05 acres of Monterey spineflower habitat, and may result in a loss and/or disturbance of sandmat Manzanita, Hickman's onion and Santa Cruz microseris within the Maritime Chaparral habitat. Furthermore, implementation of the proposed action/project would result in the removal of Coast live oak, Monterey pine, and Monterey cypress trees. Coast live oak trees are located within the Coast oak woodland habitat (5.1 acres) and Maritime Chaparral (13.3 acres). Non-native Monterey pine and Monterey cypress trees are located throughout the project area.

### Drainage

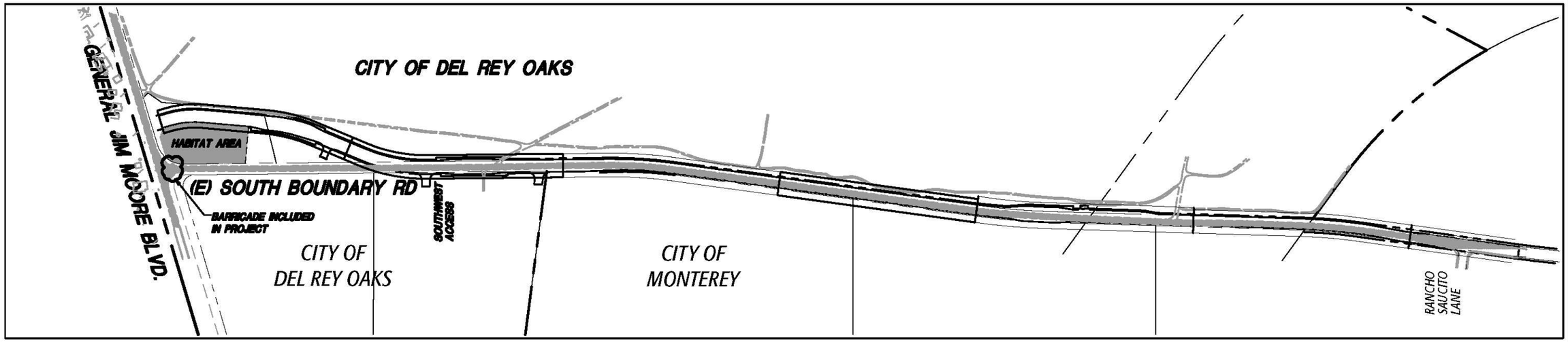
Drainage from the proposed action/project would be conveyed via curb and gutters along the edges of the South Boundary Road improvements to underground infiltration systems, which will include oil and sediment interceptor tanks, designed to accommodate runoff up to 100-year storm events. Eight underground infiltration systems are proposed along the northern side of South Boundary Road. Improvements along Gigling Road would include a similar underground infiltration system as proposed along South Boundary Road. The underground infiltration system is shown in South Boundary Road improvement plans included in **Appendix B**.

### Landscaping and Erosion Control

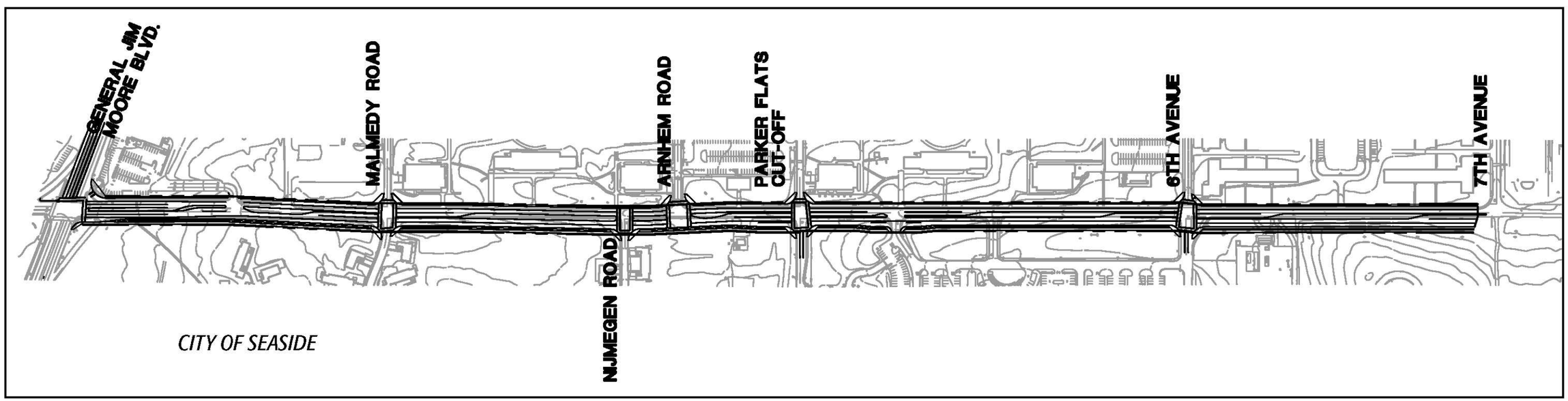
The proposed action/project would include hydroseeding of all exposed surfaces after grading is complete and implementation of irrigation and landscaping plan consistent with Recreation Policies B-2 and G-3 in the BRP *and the FORA "In Tract vs. Basewide Policy."* The proposed landscaping plans would be developed according to the FORA minimum standards.

TA_C:\Work\Fort Ord_City of\Fort Ord Reuse Authority_FORA\Figures

South Boundary Road Improvements




Gigling Road Improvements




Note: See Appendix B for a complete set of project roadway improvements

Source: Creegan + D'Angelo, 2008, 2009; PMC 2009

NOT TO SCALE

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**Figure 2-3**

Project Roadway Improvements

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### Street Lighting

The proposed action/project includes the installation of street lighting along Gigling Road between the Gigling Road/General Jim Moore Boulevard intersection and the Gigling Road/7th Avenue intersection. The proposed lighting would consist of a combination of double arm electroliers in the median on Gigling Road, alternating with single arm poles located behind the curb line.

### Utilities

The proposed action/project includes the installation of utilities within the proposed roadway alignments. The utilities to be installed include water and recycled water transmission lines, wastewater gravity and force main pipelines, storm drain pipelines and infiltration systems, gas lines, electrical lines, CATV, and communication facilities. Along Gigling Road, 33 existing power poles will be relocated by "others."

### Traffic Signals

Based on meeting warrants for traffic signals, the cities of Seaside and Del Rey Oaks may install traffic signals at intersection South Boundary Road/General Jim Moore Boulevard in the future. Signal installation is not part of the current action and intersections will be controlled by three-way stops.

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# Chapter 3

# Alternatives Considered

# CHAPTER 3: ALTERNATIVES CONSIDERED

Alternatives to the proposed action/project are limited, as the proposed action/project is the result of necessary roadway improvements identified for buildout of the *Fort Ord Reuse Plan*. The *Fort Ord Reuse Plan* (BRP) identified necessary roadway improvements required for the buildout of the plan based on the *1997 TAMC Fort Ord Transportation Study*. Since then, FORA has prepared a *Fee Reallocation Study* that reviewed and reassessed the original required improvements and identified new improvements that would better improve operations under buildout conditions.

In addition to the proposed action/project, one additional alternative that is consistent with the *Fee Reallocation Study* was considered, as described below. The following discussion also indicates the relative environmental merits and consequences of this alternative.

**Alternative 1 - No Action (No Build)**

The No-Action Alternative is similar to the No-Build scenario in the *Fee Reallocation Study* in that the project roadway segments would remain in their current condition and alignment without the proposed improvements. The No-Build alternative was based on the year 2000 and forecasted traffic conditions based on only committed road improvement projects. Under this alternative, the project roadways would be subject to increasing congestion as development occurs in accordance with current land use projections anticipated for the former Fort Ord area. According to the *Fee Reallocation Study*, Highway 68, Highway 156, Davis Road north of Blanco Road, and Highway 1 at Monterey Road operate at unacceptable levels under the base year 2000 conditions. Many other regional roadway segments would degrade to unacceptable levels of service of LOS E by 2030. The No Action Alternative would not meet the project objective of improving the roadways consistent with the circulation plans of the *Fort Ord Reuse Plan, Regional Transportation Plan, City of Seaside General Plan, City of Del Rey Oak General Plan,* and *City of Monterey General Plan*. Under the No Action Alternative, the project roadways would not meet current safety standards, including adequate intersections, turning lanes, shoulder width, and bicycle lanes. Due to the location of the existing roadway, increased traffic would result in an incremental increase in noise impacts to sensitive receptors.

In summary, the No Action Alternative was rejected because it would result in unacceptable levels of traffic congestion and increased noise levels. These unacceptable levels would not meet the project objective of implementing the adopted circulation plans, and would result in the project roadways not meeting minimum roadway safety standards at buildout.

**Alternative 2 – Revised Project Design**

Under **Alternative 2–Revised Project Design**, the proposed action/project would be redesigned to be consistent with improvement projects recommended in the FORA *Fee*

*Reallocation Study* prepared in April 2005. Since the 1997 *TAMC Fort Ord Transportation Study*, FORA has reviewed and reassessed obligations as determined in 1997 due to potential inconsistency with the *Regional Transportation Plan* (RTP) and because current projects and land uses proposed were not included in the 1997 analysis. Based on current land use and road network data and projections, the *Fee Reallocation Study* identified transportation improvements that would better improve operations.

Under **Alternative 2-Revised Project Design** the proposed project design would be revised to be consistent with the projects identified in FORA's *Fee Reallocation Study* and *CIP, and TAMC's RTP*. Although the proposed action/project is mostly consistent with the *Fee Reallocation Study, CIP, and RTP* there are some slight differences in design. Under **Alternative 2-Revised Project Design**, South Boundary Road would be upgraded to a 2-lane arterial along the existing alignment to York Road, which would increase the total improvement area by approximately 1,650 feet (0.30 miles); the existing South Boundary Road/General Jim Moore intersection would remain in place; and a new South Boundary Road/York Road intersection would be required. Gigling Road would be upgraded as a new 4-lane arterial between General Jim Moore Boulevard and the proposed Eastside Parkway, which would increase the total improvement area by approximately 875 feet longer (0.17 miles). However, extending Gigling Road to Eastside Parkway would be unnecessary until the final alignment of that roadway has been defined or constructed.

Under this alternative, the effects to biological resources, soil, water quality, noise and air quality would be slightly increased within the Gigling Road improvement area due to more area of disturbance. South Boundary Road may be subject to increasing congestion as development occurs within the City of Del Rey Oaks since the roadway would no longer provide direct access to the City of Del Rey Oaks property designated for commercial development, which is anticipated to generate substantial trips. In addition, additional trips to and from State Route 68 would likely be redistributed to York Road and South Boundary Road. This may cause additional congestion on these roadways. This potential increased congestion could result increased noise and air quality impacts. However, these impacts may be offset by improved operations along State Route 68, which operates at LOS F under existing conditions.

Widening of South Boundary Road within the alignment as proposed by the project would be largely dependent upon the outcome of negotiations with the California Native Plant Society (CNPS) to relocate a currently identified habitat preserve area further south. CNPS has be designated approximately 2-acres of land for a habitat preserve area along General Jim Moore Boulevard, adjacent to the proposed Del Rey Oaks Resort, and approximately where the proposed project would realign South Boundary Road and relocate the South Boundary Road/General Jim Moore Boulevard intersection. Therefore, implementation of the proposed project would require successful negotiations with CNPS to relocate their habitat preserve area to an area south of the currently identified location, which would be adjacent to the existing South Boundary Road alignment (to be abandoned under the proposed project description). If negotiations with CNPS are unsuccessful, **Alternative #2** provides an alternate alignment for South Boundary Road, if necessary. However, this

would require re-design of the access point to the proposed Del Rey Oaks Resort. This alternative would have similar impacts to biological resources as the proposed project. However, relocating the habitat preserve area south of the currently designated location may result in more benefits to habitat preserve as it would no longer be located sandwiched between a proposed retail center/roadway and a boutique hotel. Instead the habitat preserve would be adjacent to the abandoned existing South Boundary Road with additional habitat to the south and the proposed boutique hotel.

**Alternative 2-Revised Project Design** would be considered an option if negotiations with CNPS are unsuccessful and if the alignment of Eastside Parkway is identified. However, this alternative would likely result in greater impacts to biological resources, soil, water quality air quality and noise.

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# Chapter 4

# Affected Environment

# CHAPTER 4: AFFECTED ENVIRONMENT

## Introduction

The setting information contained in this chapter is based on review of the proposed improvement plans and observations of field conditions, as well as information contained in technical reports as described in the bibliography. This chapter and Chapter 5 address the following environmental topics:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation/Circulation
- Utilities and Service Systems

## Aesthetics

### Environmental Setting

Regional Visual Context

The project area is primarily located within the lands of the former Fort Ord, which is part of the greater Monterey Bay region. As evidenced by the region's strong tourist economy, the Monterey Bay region is recognized as one of the most scenic locations within the western United States. With adoption of the *Fort Ord Reuse Plan (BRP)*, a significant amount of analysis on the regional visual context has been completed. This EA/IS builds upon this relevant information.

The former Fort Ord contains several important visual resources, but the high quality views are confined to the western portion of the base where views toward Monterey Bay are available from State Route 1. There are some points where Gigling Road would be visible from public viewing areas in the short-term following construction of the roadway and prior to the development of the surrounding properties as planned in the *BRP*.

Site Specific Views

The South Boundary improvement area encompasses approximately 7,593 linear feet (1.44 miles) between the proposed realigned General Jim Moore Boulevard/South Boundary Road intersection and a point 200 feet east of Rancho Saucito Lane. The Gigling Road improvement area encompasses approximately 4,883 linear feet (0.92 miles) between General Jim Moore Boulevard and 7$^{th}$ Avenue.

The South Boundary Road improvement area begins in an urban area and goes into a rural area on the edge of development in the cities of Seaside, Del Rey Oaks and Monterey. The

area that is proposed for the realigned roadway is predominately undisturbed. The Gigling Road improvement area extends perpendicular east-northeast from General Jim Moore Boulevard along the existing alignment, which is predominantly disturbed and developed. Photographs of the existing conditions are provided in **Figures 4-1a** through **4-1d**.

In the vicinity of the South Boundary Road improvement area, the visual setting primarily consists of commercial land uses associate with Ryan Ranch Business Park, located south of the project area; and undisturbed wildlands to the north, which are currently planned to be developed as the Resort at Del Rey Oaks. Along the South Boundary Road realignment section, the vegetation is somewhat dense and consists primarily of native shrubs, trees, and low growing plants. A 2.25 acre "Habitat Area" is located between the existing and proposed South Boundary Road/General Jim Moore Boulevard intersections.

The visual setting within the Gigling Road improvement area is comprised of existing development associated with the former Fort Ord on both sides of the roadway. This existing development includes but is not limited to a six-story Department of Defense building at the former hospital, and a Water District facility and a PG&E transfer station.

Light and Skyglow

The terms "glare" and "skyglow" are used to describe the visual effects of lighting in the project area. For the purposes of this analysis, glare is considered to be direct exposure of bright lights and skyglow is a glow that extends beyond the light source and dominates or partially dominates views above the horizon within the project area are primarily contributed by existing street lights and lighting associated with existing development located adjacent to the project area.

**Regulatory Framework**

Local

*Fort Ord Reuse Plan*

The entire project area is located within the boundaries of the former Fort Ord. The BRP identifies the following policies, to preserve and enhance the aesthetic quality of the former Fort Ord:

> **BRP Recreation Policy B-2 (City of Seaside).** The City shall establish landscape gateways into the former Fort Ord along major transportation corridors with the intent of establishing regional landscape character.
>
> **BRP Recreation Policy G-3 (City of Seaside).** The City/County shall adopt landscaping standards to guide development of streetscapes, parking lots, government facilities, industrial grounds, and other public and semi-public settings within the former Fort Ord.

T:_CS\Work\Ford Ord, City of\Fort Ord Reuse Authority_FORA\Figures

General Jim Moore Boulevard looking southwest towards the existing General Jim Moore Boulevard South/Boundary Road intersection.

Existing South Boundary Road looking northwest towards existing intersection with General Jim Moore Boulevard/South Boundary Road Intersection.

Existing South Boundary Road looking Southeast from existing General Jim Moore Boulevard South/Boundary Road intersection.

South Boundary Road looking southeast from existing Rancho Saucito Lane/South Boundary Road intersection.

Source: PMC, 2009

**Figure 4-1a**

South Boundary Road Improvement Area - Site Photos

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Explosives warning on General Jim Moore Boulevard north of proposed South Boundary Road/General Jim Moore Boulevard Intersection.

General Jim Moore Boulevard looking southeast at proposed South Boundary Road/General Jim Moore Boulevard Intersection location.

South Boundary Road looking north to unexploded ordnance area.

South Boundary Road/Rancho Saucito Lane Intersection looking south to Ryan Ranch Business Park.

Source: PMC, 2009

**Figure 4-1b**

South Boundary Road Improvement Area - Site Photos

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Gigling Road looking east at Gigling Road/General Jim Moore Boulevard Intersection.

Gigling Road looking east at Department of Defense complex entrance to the south.

Gigling Road looking west near PG&E transformer station.

Gigling Road looking east from Gigling Road/ General Jim Moore Boulevard Intersection.

Source: PMC, 2009

**Figure 4-1c**

Gigling Road Improvement Area - Site Photos

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Gigling Road looking north at 4468 Gigling Road (Military Police Station).

Gigling Road looking south at the Department of Defense complex.

Gigling Road looking south at PG&E transformer station.

Gigling Road/Malmady Road Intersection looking south at Marshall Park residential development.

Source: PMC, 2009

**Figure 4-1d**

Gigling Road Improvement Area - Site Photos

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*City of Monterey*

The eastern portion (approximately 1,160 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Monterey. Therefore, the following General Plan policies are applicable to the South Boundary Road improvements.

> **General Plan Urban Design – Wooded Skyline Policy b.1:** The visual skyline and foothills beyond the city limits should be under the City's control. One method of achieving this would be annexation. The City should engage in active collaboration with other governmental agencies and advocate for preservation of the forested areas.
>
> **General Plan Urban Design – Wooded Skyline Policy b.2:** New development in the ridge areas should be sensitively located to preserve the forested setting. Development in the ridge areas should not silhouette against the skyline.
>
> **General Plan Urban Design – Wooded Skyline Policy b.5:** Development in forested areas should not create obvious holes in the forest.
>
> **General Plan Urban Design – City Wide Policy f.8:** Remove overhead wires.
>
> **General Plan Urban Design – City Wide Policy f.9**: Discourage high levels of ambient light and maintain night skies where stars can be seen.

## Air Quality

### Environmental Setting

The project area is located within the North Central Coast Air Basin (NCCAB), which is comprised of Santa Cruz, San Benito, and Monterey counties. A semi-permanent high pressure in the eastern Pacific is the controlling factor in the climate of the air basin. In late spring and summer, the high-pressure system is dominant and causes persistent westerly and northwesterly winds over the entire California Coast. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. Warmer air aloft creates elevated inversions that restrict dilution of pollutants vertically, and mountains forming the valleys restrict dilution horizontally.

In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. The airflow is occasionally reversed in a weak offshore movement, and the relatively stagnant conditions allow pollutants to accumulate over a period of days. It is during this season that winds from the north or east develop and transport pollutants from either the San Francisco Bay Area or the Central Valley into the NCCAB. During winter and early spring, the Pacific High migrates southward and has less influence on the air basin. Wind direction is more variable, but northwest winds still dominate. The general absence of deep, persistent inversions and occasional storm passages usually result in good air quality for the basin as a whole. The former Fort Ord has a coastal climate characterized by dry summers and mild rainy winters.

The Monterey Bay Unified Air Pollution Control District (MBUAPCD) shares responsibility with the California Air Resources Board (CARB) for ensuring that the State and national ambient air quality standards are met within Santa Cruz, San Benito, and Monterey Counties and the North Central Coast Air Basin. State law assigns local air districts the primary responsibility for control of air pollution from stationary sources while reserving to the CARB control of mobile sources. The MBUAPCD is responsible for developing regulations governing emissions of air pollution, permitting and inspecting stationary sources, monitoring air quality and air quality planning activities. **Table 4-1, Ambient Air Quality Standards** indicates both the federal and State ambient air quality standards for criteria air pollutants.

**Table 4-1**
**Summary of Ambient Air Quality Standards**

| Pollutant | Averaging Time | California Standards [a, d] | National Standards [b, c] | |
|---|---|---|---|---|
| | | | Primary [d] | Secondary [e] |
| Ozone ($O_3$) | 1-hour | 0.09 ppm (180 μg/m$^3$) | -- | Same as Primary |
| | 8-hour | 0.070 ppm (137 μg/m$^3$) | 0.075 ppm (147 μg/m$^3$) | |
| Particulate Matter ($PM_{10}$) | AAM[j] | 20 μg/m$^3$ | -- | |
| | 24-hour | 50 μg/m$^3$ | 150 μg/m$^3$ | |
| Fine Particulate Matter ($PM_{2.5}$) | AAM | 12 μg/m$^3$ | 15 μg/m$^3$ | |
| | 24-hour | No Standard | 35 μg/m$^3$ | |
| Carbon Monoxide (CO) | 1-hour | 20 ppm (23 μg/m$^3$) | 35 ppm (40 μg/m$^3$) | None |
| | 8-hour | 9 ppm (10 μg/m$^3$) | 9 ppm (10 μg/m$^3$) | |
| | 8-hour (Lake Tahoe) | 6 ppm (7 μg/m$^3$) | – | |
| Nitrogen Dioxide ($NO_2$) [f] | AAM | 0.030 ppm (57 μg/m$^3$) | 0.053 ppm (100 μg/m$^3$) | Same as Primary |
| | 1-hour | 0.18 ppm (339 μg/m$^3$) | 0.100 | |
| Sulfur Dioxide ($SO_2$) | AAM | – | 0.03 ppm (80 μg/m$^3$) | – |
| | 24-hour | 0.04 ppm (105 μg/m$^3$) | 0.14 ppm (365 μg/m$^3$) | – |
| | 3-hour | – | – | 0.5 ppm (1,300 μg/m$^3$) |
| | 1-hour | 0.25 ppm (655 μg/m$^3$) | – | – |
| Lead [g] | 30-day Average | 1.5 μg/m$^3$ | – | – |
| | Calendar Quarter | – | 1.5 μg/m$^3$ | Same as Primary |
| | Rolling 3-Month Average | – | 0.15 μg/m$^3$ | |

| Pollutant | Averaging Time | California Standards [a, d] | National Standards [b, c] | |
|---|---|---|---|---|
| | | | Primary [d] | Secondary [e] |
| Sulfates | 24-hour | 25 μg/m³ | No Federal Standards | |
| Hydrogen Sulfide | 1-hour | 0.03 ppm (42 μg/m³) | | |
| Vinyl Chloride[g] | 24-hour | 0.01 ppm (26 μg/m³) | | |
| Visibility-Reducing Particle Matter | 8-hour | Extinction coefficient of 0.23 per kilometer —visibility of 10 miles or more (0.07—30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70%. | | |

*Notes:*

a. *California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.*

b. *National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For $PM_{10}$, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m³ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.*

c. *Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.*

d. *Any equivalent procedure, which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard, may be used.*

e. *National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.*

f. *National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.*

g. *Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.*

h. *The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.*

i. *National lead standard, rolling 3-month average: final rule signed October 15, 2008.*

j. *AAM = Annual Arithmetic Mean*

Source: CARB 2008

Under the Federal Clean Air Act, the NCCAB is designated an attainment area for all National standards Under the California Clean Air Act (CCAA), the basin is a non-attainment area for the State's ozone ($O_3$) and particulate matter ($PM_{10}$) standards.

Sensitive Receptors

Sensitive receptors (or populations) are more susceptible to the effects of air pollution than are the general population. Sensitive populations who are near sources of particulate matter, toxic air contaminants, and Carbon Monoxide (CO) are of particular concern. Land uses considered sensitive receptors include residential uses, schools, hospitals, rehabilitation centers, and convalescent homes. Sensitive receptors within two miles of the project area include residential uses and two schools.

**Regulatory Framework**

Federal and State

Air quality within the NCCAB is regulated by several jurisdictions. The following is a summary of applicable federal, state, and local regulations:

*U.S. Environmental Protection Agency*

At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

The FCAA required the U.S. EPA to establish National AAQS (NAAQS), and set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. National AAQS are summarized in **Table 4-1**.

All federal projects must conform with the U.S. EPA's general conformity rule, which requires all federal actions in federally-designated non-attainment areas to conform with the applicable implementation plans. The general conformity rule contains "de minimis" emission thresholds that are based on the severity of air pollution in an area. A project is exempt from the conformity determination requirement if its emissions are less than the de minimis thresholds as defined by Section 93.153(b) of the Clean Air Act.

*California Air Resources Board*

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs and for implementing the California Clean Air Act (CCAA) of 1988. Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts,

establishing California AAQS (CAAQS), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles.

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, Sulfur Dioxide, and Nitrogen Dioxide by the earliest practical date. The current CAAQS are summarized in **Table 4-1**.

*California Title 24, Building Energy Efficiency Standards*

The Energy Efficiency Standards for Residential and Nonresidential Buildings were established in 1978 in response to a legislative mandate to reduce California's energy consumption. These standards are codified in Title 24, Part 6, of the California Code of Regulations and are generally referred to as "Title 24 Standards." By reducing the heating and cooling demands of buildings, California's Energy Efficiency Standards result in decreased emissions associated with the use of natural gas fired appliances and electricity production. Reduction in energy consumption reduces the amount of air pollutants emitted by energy purveyors.

*California Legislation*

As part of the analysis, a review of legislature was conducted, which included, but was not limited to, a review of Executive Order S-3-05 (2005), AB 32 (2006), SB 97, and SB 375, which are summarized below:

**Executive Order S-3-05 (2005):** On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80% below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases" and to develop appropriate regulations and establish a mandatory reporting system to track and monitor global warming emissions levels. Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team (CARB 2008b).

**Assembly Bill 32:** In 2006, Governor Schwarzenegger signed the nation's most progressive global warming legislation, AB 32 – mandating that California cut its greenhouse gas emissions to 1990 levels by 2020. California took the next step toward putting that mandate into law by adopting the AB 32 Scoping Plan, the roadmap that will guide California toward achieving their GHG reductions goals. This multi-sector, market-based plan is expected to create jobs, spur investment, steer California toward a clean-energy future and serve as a template for the nation.

**Senate Bill 97**: While the AB 32 Scoping Plan includes a comprehensive discussion of potential adverse environmental impacts from GHG emissions, it does not specifically address CEQA guidelines. SB 97 requires the Governor's Office of Planning and Research (OPR) to develop CEQA guidelines for the mitigation of GHG emissions in CEQA documents. Final CEQA guidance will likely be available in January of 2010.

**Senate Bill 375:** This Bill requires metropolitan planning organizations (MPOs) to include sustainable communities strategies (SCS), as defined, in their regional transportation plans (RTPs) for the purpose of reducing greenhouse gas emissions. It also aligns planning for transportation and housing, and creates specified incentives for the implementation of the SCS.

Regional

*Monterey Bay Unified Air Pollution Control District*

The MBUAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in the NCCAB, within which the project is located. In an attempt to achieve NAAQS and CAAQS and maintain air quality, the MBUAPCD has most recently completed the *2008 Air Quality Attainment Plan (AQAP)* for achieving the state ozone standards and the *2007 Federal Maintenance Plan* for maintaining federal ozone standards. The MBUAPCD has also adopted the *SB 656 Plan* for meeting state standards related to airborne particulate matter (MBUAPCD 2009).

Local

*Fort Ord Reuse Plan*

The entire project area is located within the boundaries of the former Fort Ord. The following BRP air quality policies would be applicable to the proposed action/project.

**BRP Air Quality Policy A-1:** Each jurisdiction shall participate in regional planning efforts to improve air quality.

**BRP Air Quality Program A-1.1:** Each jurisdiction shall continue to cooperate with the MBUAPCD in carrying out the regional Air Quality Management Plan.

**BRP Air Quality Program A-1.2:** Each jurisdiction shall coordinate with the TAMC to carry out the Congestion Management Plan.

**BRP Air Quality Policy A-2:** Each jurisdiction shall promote local efforts to improve air quality.

**BRP Air Quality Program A-2.1:** Each jurisdiction shall use the CEQA process to identify and avoid or mitigate potentially significant project specific and cumulative air quality impacts associated with development. As a Responsible Agency, the

MBUAPCD implements rules and regulations for many direct and area sources of criteria pollutants and toxic air contaminants.

**BRP Air Quality Program A-2.2:** Each jurisdiction shall use the Transportation Demand Management Ordinance and similar transportation measures to encourage commute alternatives.

*City of Del Rey Oaks*

The western portion (approximately 6,433 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Del Rey Oaks. Therefore, the following General Plan policy is applicable to the South Boundary Road improvements.

**General Plan Policy C/OS-13:** The City will encourage the improvement of air quality in Del Rey Oaks and in the region by implementing the measure described in the Monterey Bay Air Quality Management Plan. Such measures include, but are not limited to, measures to reduce dependence on the automobile and encourage the use of alternate modes of transportation such as buses, bicycling and walking.

*City of Monterey*

The eastern portion (approximately 1,160 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Monterey. Therefore, the following General Plan policy is applicable to the South Boundary Road improvements.

**General Plan Conservation – Air Quality Policy c.1:** Reduce air pollution generated by motor vehicles by encouraging the use of public transit, car-pooling, bicycles, and walking as alternatives. Policies to achieve these goals are found in the Circulation Element.

## Biological Resources

### Affected Environment

PMC prepared a *Biological Resource Assessment* (BRA) in August 2009, which has been incorporated herein and included in **Appendix D**. The BRA provides a description of the affected environment, identifies affects of the project and recommending mitigation measures where appropriate. The BRA refers to the project area as the Project Study Area (PSA), which encompasses the project footprint and a 20-foot Temporary Construction Zone (TCZ).

Topography and Drainage

The general topography within the project area and the surrounding areas are mostly gently sloping to nearly level. The elevation within the South Boundary Road improvement area ranges from 140 to 280 feet above mean sea level (MSL). The elevation within the Gigling Road improvement area ranges from 245 to 350 feet above MSL. Seasonal surface runoff consists primarily of sheet flow. Wetlands or other waters of the U.S., including drainages,

were not observed at either the South Boundary Road or Gigling Road improvement areas. The Gigling Road improvement area has existing curbs, gutters, and stormwater drainage systems while the South Boundary Road improvement area does not have any existing drainage systems.

Vegetative Communities

Three vegetative communities; coastal oak woodland, maritime chaparral, and urban/ruderal, have been identified within the project area. These vegetative communities may provide habitat for a number of common and special-status plant and wildlife species. The project area encompasses approximately 13.3 acres of maritime chaparral; approximately 5.1 acres of coastal oak woodland; and approximately 11.1 acres of Urban/Ruderal as shown in **Table 4-2, Vegetative Communities within the Project Area**. The vegetative communities located within the South Boundary Road improvement area are shown in **Figure 4-2** and the vegetative communities located within the Gigling Road improvement area are shown in **Figure 4-3**. These vegetative communities are described in more detail below.

**Table 4-2**
**Vegetative Communities within the Project Area**

| Vegetative Community | Acres of Vegetative Communities | | |
|---|---|---|---|
| | Within the Project Footprint | Within the Temporary Construction Zone (TCZ) | Within the Project Area |
| **SOUTH BOUNDARY ROAD IMPROVEMENT AREA** | | | |
| Maritime Chaparral | 8.1 | 5.2 | 13.3 |
| Coastal Oak Woodland | 2.3 | 1.7 | 4.0 |
| Urban/Ruderal | 0.1 | 0.4 | 0.5 |
| Subtotal | 10.5 | 7.3 | 17.8 |
| **GIGLING ROAD IMPROVEMENT AREA** | | | |
| Coastal Oak Woodland | 0.8 | 0.3 | 1.1 |
| Urban/Ruderal | 6.5 | 4.1 | 10.6 |
| Subtotal | 7.3 | 4.4 | 11.7 |

*Maritime Chaparral*

The entire 13.3 acres of maritime chaparral occurs only within the South Boundary Road improvement area. The maritime chaparral community occurs on well-drained, sandy substrates within areas experiencing summer coastal fog and is characterized by plants such as manzanita (*Arctostaphylos* spp.) and California lilac (*Ceanothus cuneatus*) species. Within the project area, the maritime chaparral community is primarily dominated by shaggy-barked manzanita (*Arctostaphylos tomentosa* ssp. *tomentosa*) with chamise (*Adenostoma fasciculatum*) and Monterey ceanothus (*Ceanothus cuneatus* var. *rigidus*).

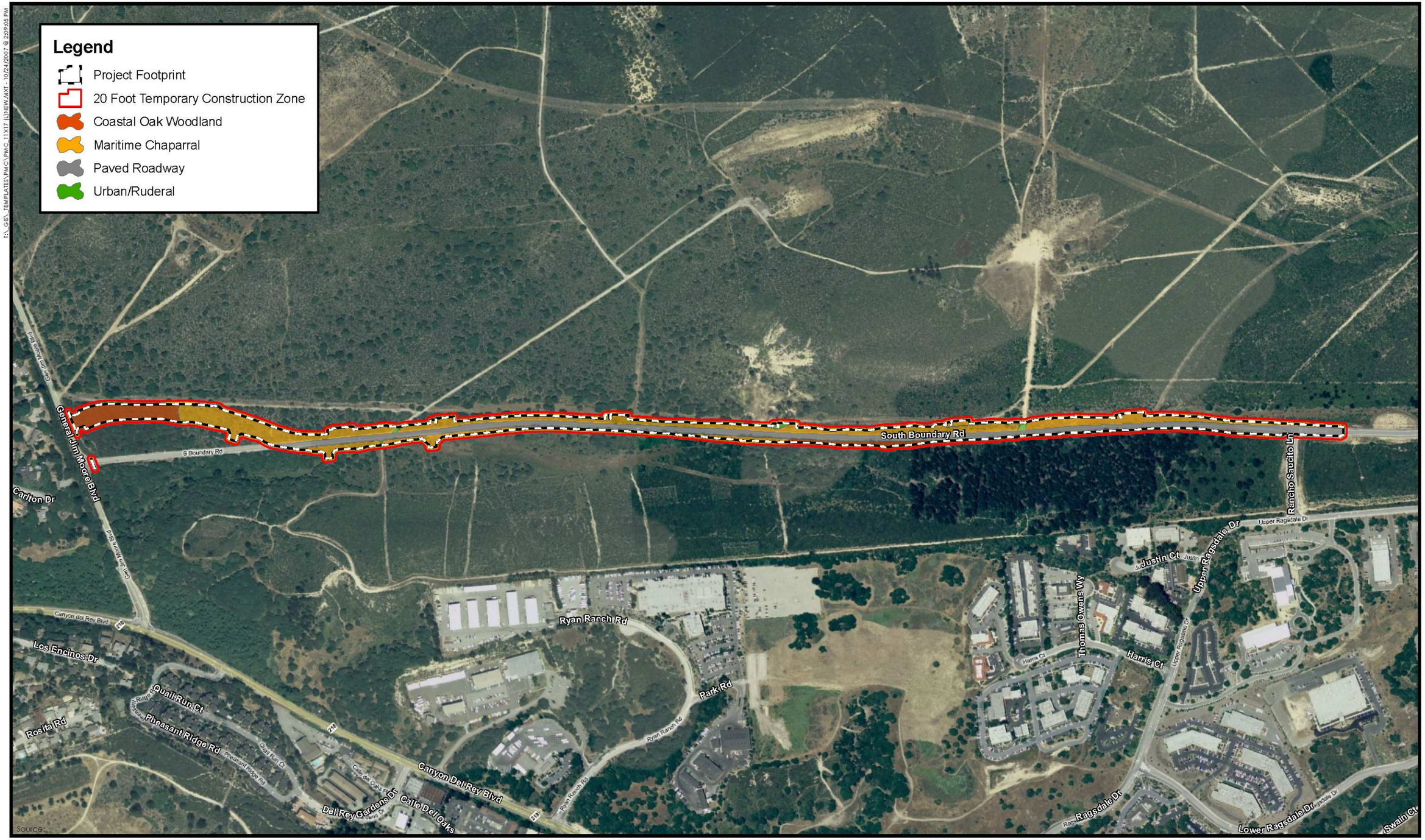


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**Figure 4-2**
South Boundary Improvement Area Habitat Map

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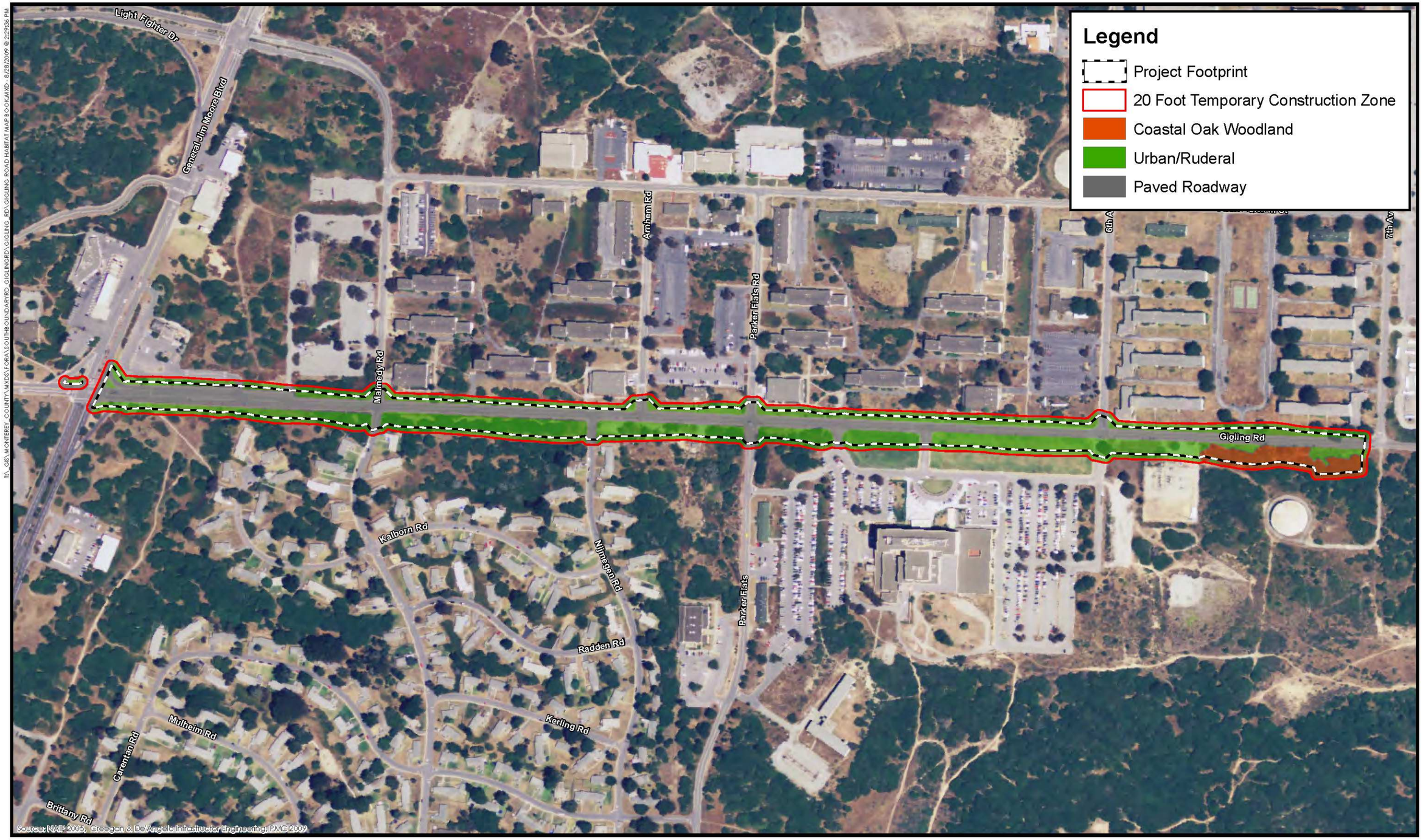


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**Figure 4-3**
Gigling Road Improvement Area Habitat Map

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Other speces present include black sage (*Salvia mellifera*), turkey mullein (*Eremocarpus setigerus*), pampas grass (*Cortaderia selloana*), coyote brush (*Baccharis pilularis*), and sandmat manzanita (*Arctostaphylos pumila*). Monterey spineflower (*Chorizanthe pungens* var. *pungens*), a federally listed species, and diffuse spineflower (*Chorizanthe diffusa*) can be found within disturbed openings.

Maritime chaparral has the potential to support a diversity of wildlife. Both maritime chaparral and coastal scrub communities provide important habitat for the Morro Bay-, Santa Cruz-, and Pacific- kangaroo rat species (*Dipodomys heermanni morroensis, D. venustus venustus, D. simulans*, respectively); the San Diego desert woodrat (*Neotoma lepida*); California quail (*Lophortyx californicus*); sage sparrow (*Amphispiza belli*); rufous-crowned sparrow (*Aimophila ruficeps*); California thrasher (*Toxostoma redivivum*); and Costa's hummingbird (*Calypte costae*). The black legless lizard (*Anniella pulchra nigra*) and California horned lizard (*Phrynosoma coronatum frontale*) are also special-status species associated with these habitats). The sandy soils allow animals to burrow, the understory growth and abundant dead wood provide material nest construction, and the oak trees provide roosting and nesting sites for a variety of birds. Within the project area, there are patches of loose friable sandy soils and an abundance of warm, sunny, open areas that could be inhabited by the black legless lizard or the California horned lizard.

*Coastal Oak Woodland*

There are approximately 5.1 acres of coastal oak woodland located within the project area. The overstory in coastal oak woodland consists of deciduous and evergreen hardwoods, such as California bay (*Umbellularia californica*), pacific madrone (*Arbutus menziesii*), tanoak (*Lithocarpus densiflorus)*, and canyon live oak (*Quercus chrysolepis*). Within the South Boundary Road improvement area, there are approximately 4 acres of coastal oak woodland, which occur mainly within the northern portion of the improvement area, although there is a small section also found along the central west side of the existing roadway where this community intergrades with a closed cone conifer community (*Pinus* spp.). The coastal oak woodlands within the South Boundary Road area has an understory that is comprised of shaggy-barked manzanita, orange bush monkeyflower, and coffeeberry (*Rhamnus californica*). Within the Gigling Road improvement area, there are approximately 1.1 acres of coastal oak woodland, which consists of a small stand at the east end of the roadway on the southern side of the alignment. The coastal oak woodlands within the Gigling Road improvement area has an understory comprised mainly of poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), shaggy-barked manzanita, and orange bush monkeyflower (*Mimulus aurantiacus*).

Coastal oak woodlands provide habitat for a variety of wildlife species such as California quail, wild turkeys (*Meleagris gallopavo*), and black-tail deer (*Odocoileus hemionus*). At least 60 species of mammals may use oaks in some way. In addition, 110 species of birds have been observed during the breeding season in California habitats where oaks form a significant part of the canopy or subcanopy. A red-tailed hawk (*Buteo jamaicensis*), numerous western fence lizards (*Sceloporus occidentalis*), and a variety of small passerine birds were observed within the coastal oak woodland within the project area.

*Urban/Ruderal*

Approximately 11.1 acres of urban/ruderal habitat occurs within the project area. Urban habitat has both native and exotic species in a relatively static composition within a downtown, residential, or suburbia setting. Species richness in these areas depends greatly upon community design (i.e., open space considerations) and proximity to the natural environment. Vegetation in urban areas consists primarily of introduced ornamental trees and shrubs and manicured lawns as well as, non-native and invasive herbaceous species in disturbed areas. Within the South Boundary Road improvement area, there is approximately 0.5 acres of urban/ruderal habitat, consisting of the existing South Boundary Road and dirt roads. The dirt roads were used as training sites for marching infantrymen, but have not been used extensively since the base closure and plants are beginning to grow within the roadways. Within the Gigling Road improvement area, there are approximately 10.6 acres of urban/ruderal habitat that include common plants such as: Bermuda grass (*Cynodon dactylon*), bluegrass (*Poa annua*), kikuyu grass (*Pennisetum clandestinum*), ice plant (*Carpobrotus edulis*), slender oats, ripgut brome, red brome, and broadleaf filaree. Non-native (planted) trees included: Monterey cypress (*Cupressus macrocarpa*) and Monterey pine (*Pinus radiata*). In addition, a few planted coast live oaks are within the Gigling Road improvement area, particularly on the south side of the alignment between Malmedy Road and Nijmegen Road.

Native and introduced wildlife species that are tolerant of disturbances and/or human activities often thrive in urban habitats. During the assessment various avian species commonly found in urban and ruderal habitats were observed in the project area, such as American crow (*Corvus brachyrhynchos*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), American robin (*Turdus migratorius*), and western scrub jay (*Aphelocoma californica*). Wild turkeys and a red-shouldered hawk (*Buteo lineatus*) were also observed within the Gigling Road improvement area. Numerous small burrows are present within the sandy soils along Gigling Road and are assumed to be occupied by lizards, such as western fence lizard, and ground squirrels (*Spermophilus beecheyi*).

Special-status Species

Special-status species are species that have a potential risk or actual risk to their persistence in a given area or across their native habitat (locally, regionally, or nationally) and are identified by a state and/or federal resource agency, such as the California Department of Fish and Game (CDFG) and/or U.S. Fish and Wildlife Service (USFWS), and/or private organizations such as the California Native Plant Survey (CNPS). In the context of environmental review, special-status species are defined by the following codes:

- Species listed, proposed, or candidates for listing under the Federal Endangered Species Act (FESA).
- Species listed or proposed for listing under the California Endangered Species Act (CESA).
- Species designated as Species of Special Concern by CDFG.

- Species designated as Fully Protected by CDFG.
- Species meeting the definition of rare or endangered under CEQA.

The potential for each special-status species to occur within the project area was assessed based on previously recorded occurrences of the species within the vicinity, suitability of habitat within the project area, and professional expertise. Those species with potential to occur within the project area are described below.

*HMP*

The *Installation-Wide Multispecies Habitat Management Plan* (HMP) for the former Fort Ord (USACE 1997) was prepared to promote preservation, enhancement and restoration of habitat while allowing implementation of the BRP. The HMP accounts for loss of up to 18 special-status species through establishment of approximately 16,000 acres of habitat reserves and 400 acres of habitat corridors. However, the HMP does not authorize incidental take of any species listed as threatened or endangered under FESA by entities acquiring land at the former Fort Ord.

*Special-Status Plants*

Based on a records search of the California Natural Diversity Database (CNDDB), the CNPS online electronic inventory, and the USFWS online species list, special-status plant species have the potential to occur within the vicinity of the project area. Based on field observations and literature review, the potential for occurrence within the project area has been determined for each species.

According to the BRA, the Gigling Road improvement area does not have the potential to support special-status species based on the disturbed nature of the area and four special-status plant species have been identified as potentially occurring within the South Boundary Road improvement area. The four special-status plant species identified as potentially occurring within the South Boundary improvement area include: Hickman's onion (*Allium hickmanii*), sandmat manzanita, Monterey spineflower, and Santa Cruz microseris (*Stebbinsoseris decipiens*). Of the four species that have potential to occur, two special-status plant species, Monterey spineflower and sandmat manzanita, were observed within the South Boundary Road improvement area during the focused rare plant survey and assessment. The Seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*) species was also observed west of the proposed South Boundary Road/General Jim Moore Boulevard and north of where a road barrier would be placed to block access to the existing South Boundary Road. However, since the Seaside bird's-beak was observed outside of the project area, it is not addressed further in this analysis.

The locations of observed Monterey spineflower and Seaside bird's-beak species are shown in **Figures 4-4a** through **4-4d**. Although occurrences of sandmat manzanita were observed within the project area, this species is known to be a common component of the maritime chaparral within the former Fort Ord and was not mapped. The rare plant surveys conducted by PMC in June/July 2009 focused on listed species and the sandmat manzanita

was incidentally observed. The plant survey was not conducted during the blooming period for Hickman's onion and Santa Cruz microseris, therefore, their presence or absence could not be confirmed at this time. The species identified as occurring or potentially occurring within the PSA are further described below.

**Hickman's Onion**

Hickman's onion is a CNPS List 1B plant with no state or federal status and is not a target species under the former Fort Ord HMP. This plant is a bulbiferous herb in the Liliaceae family that is found in closed-cone coniferous forest, maritime chaparral, coastal prairie, coastal scrub, and valley and foothill grassland habitats at elevations ranging from five to 200 meters above MSL. This species typically flowers from March to May.

This species was not observed during the plant survey and assessment conducted by PMC biologists in June and July 2009. However, there is one previously recorded occurrence within a one–mile radius of the South Boundary Road improvement area (CDFG 2009). According to the BRA, the maritime chaparral within the South Boundary Road improvement area provides suitable habitat for this species.

**Sandmat Manzanita**

Sandmat manzanita is a CNPS List 1B species with no state or federal status and is target species under the Fort Ord HMP. This plant is an evergreen shrub in the Ericaceae family that is found in closed-cone coniferous forest, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on open, sandy soils at elevations ranging from three to 205 meters above MSL. This species typically flowers from February to May.

This species was observed during the plant survey and assessment conducted by PMC biologists in June and July 2009. Sandmat manzanita was observed within the PSA; however, this species is known to be a common component of the maritime chaparral within the former Fort Ord. The observed plants were not mapped due to the common nature of this species and because the plant survey was not conducted during the blooming period for this species. There is one previously recorded occurrence within a one–mile radius of the Gigling Road improvement area and two previously recorded occurrences within a one-mile radius of the South Boundary Road improvement area (CDFG 2009). According to the BRA, the maritime chaparral within the South Boundary Road improvement area provides suitable habitat for this species.

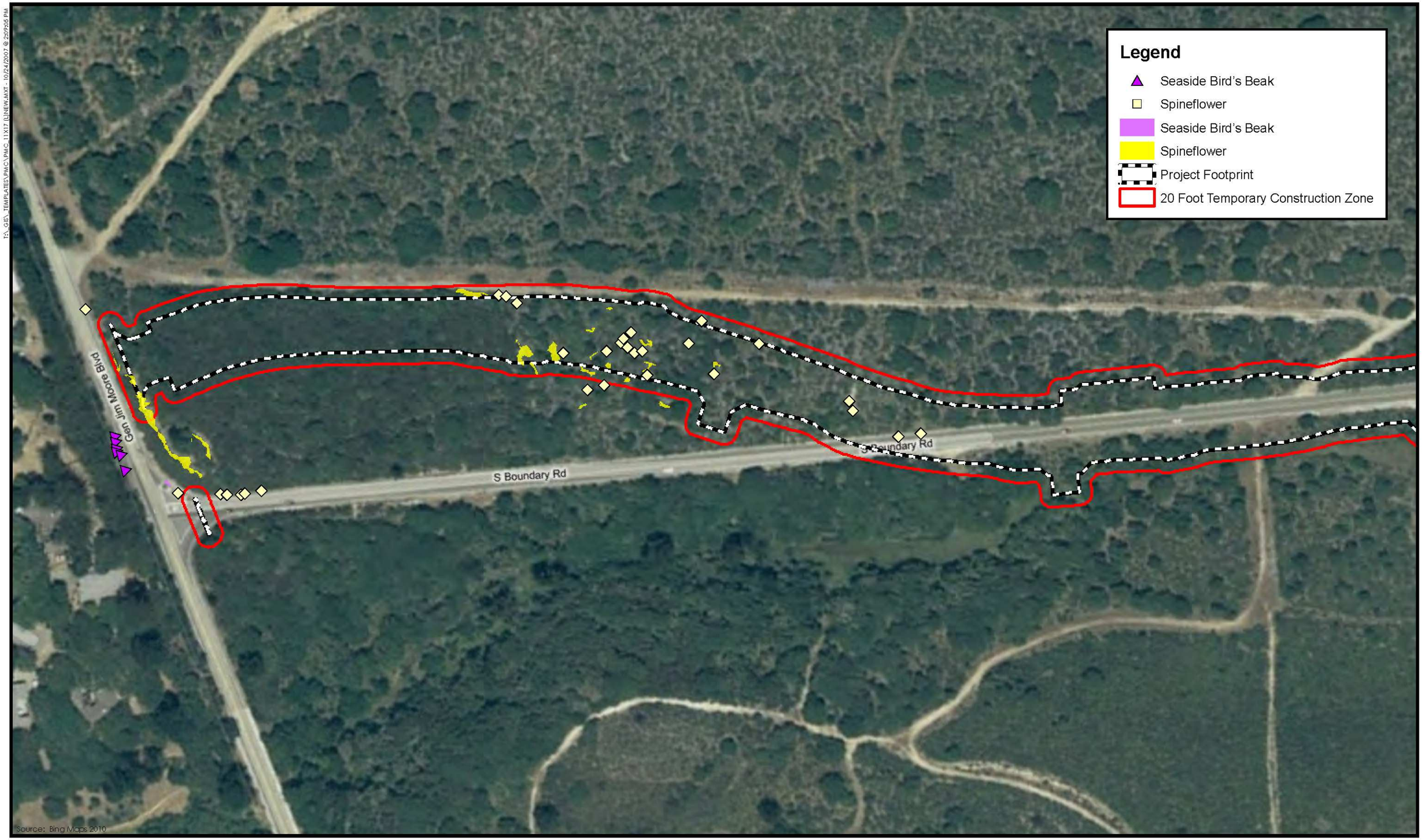


**Figure 4-4a**
Special Status Plant Species

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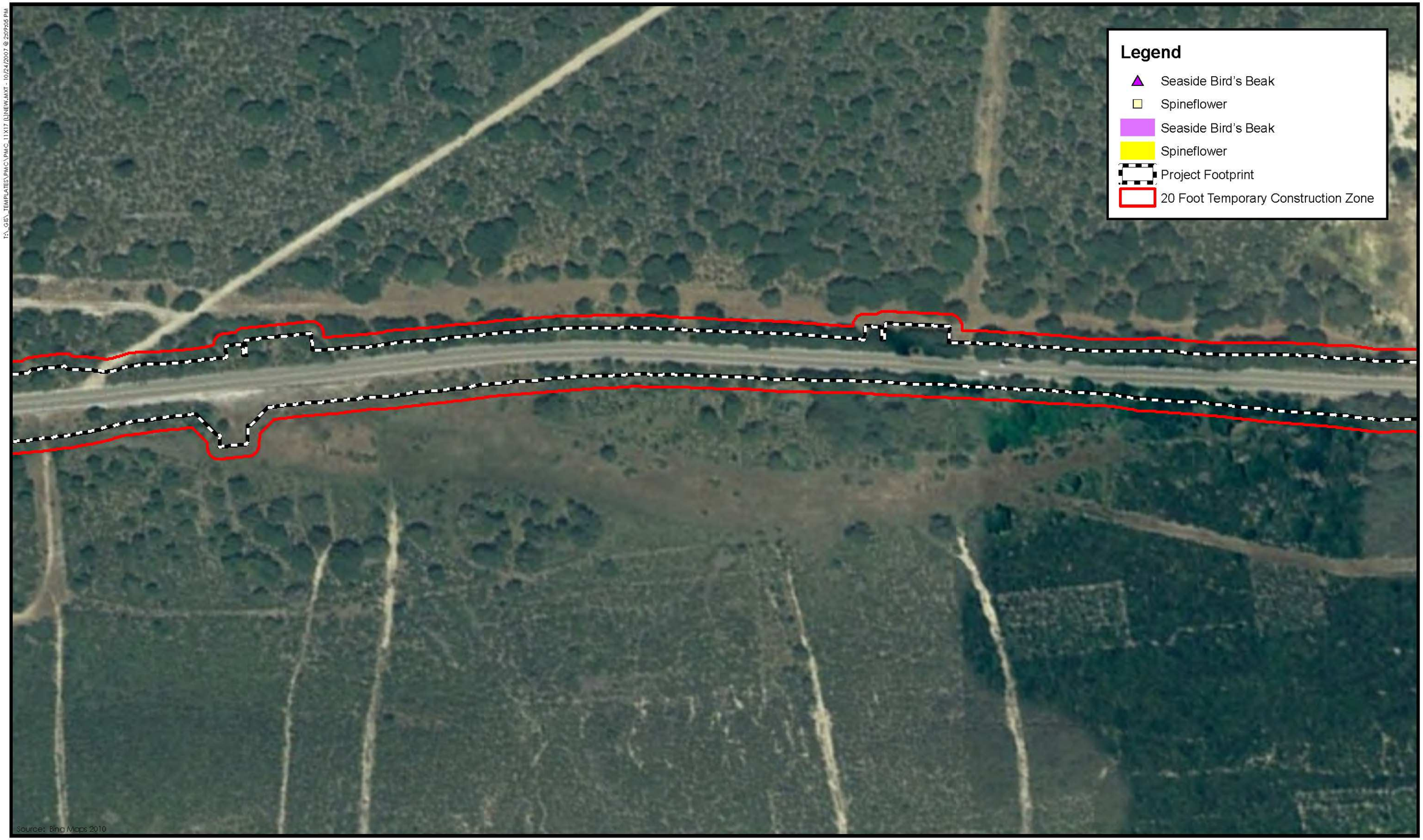


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**Figure 4-4b**
Special Status Plant Species

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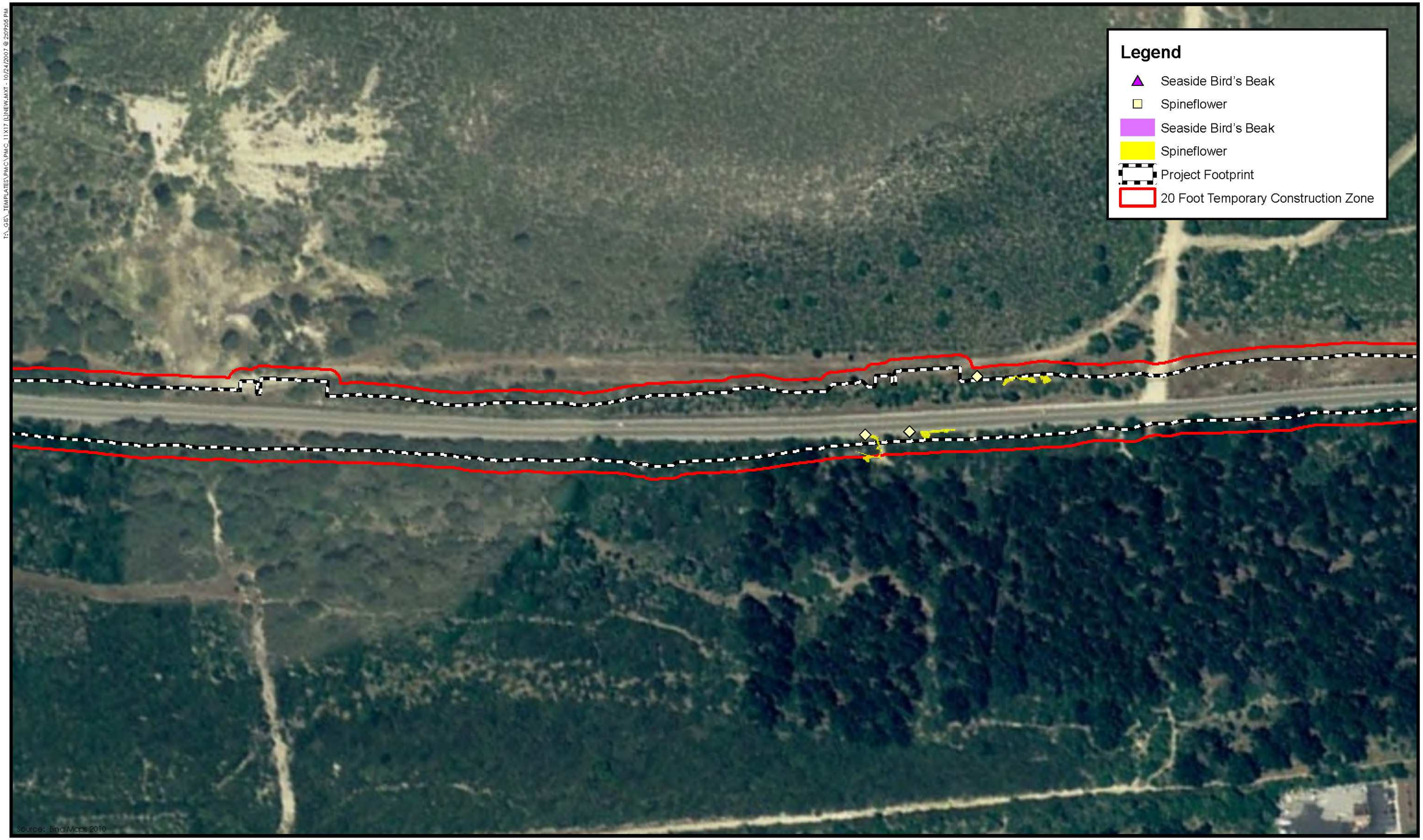


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**Figure 4-4c**
Special Status Plant Species

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**Figure 4-4d**
Special Status Plant Species

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### Sandmat Manzanita

Sandmat manzanita is a CNPS List 1B species with no state or federal status and is target species under the Fort Ord HMP. This plant is an evergreen shrub in the Ericaceae family that is found in closed-cone coniferous forest, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on open, sandy soils at elevations ranging from three to 205 meters above MSL. This species typically flowers from February to May.

This species was observed during the plant survey and assessment conducted by PMC biologists in June and July 2009. Sandmat manzanita was observed within the PSA; however, this species is known to be a common component of the maritime chaparral within the former Fort Ord. The observed plants were not mapped due to the common nature of this species and because the plant survey was not conducted during the blooming period for this species. There is one previously recorded occurrence within a one–mile radius of the Gigling Road improvement area and two previously recorded occurrences within a one-mile radius of the South Boundary Road improvement area (CDFG 2009). According to the BRA, the maritime chaparral within the South Boundary Road improvement area provides suitable habitat for this species.

### Monterey Spineflower

Monterey spineflower is a CNPS List 1B species, a federally listed as threatened species, and is target species under the Fort Ord HMP. This plant is an annual herb in the Polygonaceae family that occurs on sandy soils within coastal dune, coastal scrub, maritime chaparral, cismontane woodland, and valley and foothill grassland habitats at elevations ranging from three to 450 meters above MSL. This species typically flowers from April to June, and sometimes into July.

This species was observed in various locations throughout the South Boundary improvement area during the plant survey and assessment conducted by PMC biologists in June and July 2009. There is one previously recorded occurrence within a one-mile radius of the Gigling Road improvement area and two previously recorded occurrences within a one-mile radius of South Boundary Road improvement area. Based on the 2009 surveys conducted by PMC, Monterey spineflower occupied approximately 0.10 acre within the South Boundary Road improvement area (footprint and TCZ). This species was not observed at the Gigling Road improvement area. According to the BRA, openings within maritime chaparral within the South Boundary Road improvement area provides suitable habitat for this species, although this species was not observed at any other locations than that described above. The South Boundary Road improvement area is designated as "Development" in the HMP for Fort Ord and is excluded as critical habitat for the Monterey spineflower.

### Santa Cruz microseris

Santa Cruz microseris is a CNPS List 1B plant with no state or federal listing status and is not a target species under the Fort Ord HMP. This plant is an annual herb in the

Asteraceae family that is found in broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland habitats in open areas (sometimes on serpentinite) at elevations ranging from ten to 500 meters above MSL. This species typically flowers from April to May.

There is one previously recorded occurrence within a one-mile radius of the South Boundary Road improvement area. According to the BRA, the maritime chaparral within the South Boundary Road improvement area provides suitable habitat for this species.

**Trees**

Based on the known history of disturbance in the project area and vicinity, it is assumed that the Monterey pine trees observed within the South Boundary site are non-native (i.e., planted as ornamental trees and come from nursery stock). However, some of these trees are likely to be protected under the tree ordinances for the cities of Del Rey Oaks and/or Monterey (see Regulatory Framework discussion). Along Gigling Road, a number of Monterey pine and Monterey cypress trees were observed; however, these trees were planted as ornamentals. Any Monterey cypress or Monterey pine trees that have been planted are not considered protected native species. Therefore, these CNPS List 1B trees are not considered to have special-status under CEQA. However, the Monterey pine and Monterey cypress trees within the Gigling Road improvement area are protected under the City of Seaside's tree ordinance.

*Special-status Wildlife*

Based on a records search of the CNDDB and the USFWS online species list, four special-status wildlife species have the potential to occur within the vicinity of the project area including: California tiger salamander (*Ambystoma californiense*), black legless lizard, California horned lizard, and American badger (*Taxidea taxus*). No special-status wildlife species were observed during the PSA assessment; however, species-specific focused surveys were not conducted. The species identified as potentially occurring within the PSA are described below.

**California tiger salamander**

The California tiger salamander (CTS) is a federally listed threatened species and a CDFG species of special concern. This species is a target species under the Fort Ord HMP. CTS breed in seasonal pools in grasslands and lowland hills, but spend most of their life in subterranean refugia in nearby upland habitat, commonly using small mammal burrows for that purpose. CTS are known to move long distances (2 kilometers [km] or 1.24 miles) between aestivation sites and breeding pools. For successful breeding, CTS require seasonal pools that hold water for a minimum of four months to allow CTS larval metamorphosis to occur. Because CTS adults may take four to five years to reach sexual maturity, during which time they are using upland habitat, 95 to 99 percent of their life cycle is spent on land, and suitable upland habitat is critical to the survival of the species.

Presence of the species is most readily determined by springtime pond surveys or by rainy season drift fencing, pit traps, and nighttime observations.

According to the BRA, there is no suitable breeding habitat for CTS within the project area, but there is a recorded occurrence of this species within approximately 1.23 miles of the South Boundary Road improvement area, which is within the observed distance (1.24 miles) that CTS will travel from breeding sites. The nearest recorded occurrence to the Gigling Road improvement area is a distance of approximately 1.32 miles. According to the *Interim Guidelines on Site Assessments and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander* prepared jointly by the USFWS and CDFG (2003), these agencies may assume presence or infer that a significant impact will occur if the proposed action/project site is: 1) located within one kilometer (km) (0.6 mile) of a known population, and 2) no barrier exists that would inhibit immigration to the subject site. However, the 2005 Biological Opinion, *Cleanup and Reuse of Former Fort Ord, Monterey County, California, as it affects California Tiger Salamander and Critical Habitat for Contra Costa Goldfields* (USFWS 2005), uses a 2 km radius from breeding locations as an estimate of CTS upland habitat. In addition, this Biological Opinion identifies the 321-acre Del Rey Oaks property as an area that potentially supports breeding and upland habitat for CTS. A portion of the South Boundary Road improvement area travels through this property. As such, the USFWS may assume presence or infer that a significant impact would occur due to the distance to the nearest known occurrence. According to the BRA, the project area is not located within critical habitat for this species.

### Black legless lizard

The black legless lizard is a CDFG species of special concern and is a target species under the Fort Ord HMP but has no state or federal listing status. Legless lizards are fossorial animals that burrow in sand and leaf litter beneath plants and feed on insects and other invertebrates. The black legless lizard is found in loose, friable sandy soils in a variety of habitat types. At former Fort Ord, it is closely associated with the Baywood Sands and Oceano soils with native dune vegetation, coastal scrub, maritime chaparral, oak woodlands, oak savanna and grasslands.

Within the project area, the maritime chaparral, coastal scrub, and coastal oak woodland are potential habitat for the black legless lizard. There are ten previously recorded occurrences of this species within a one-mile radius of the Gigling Road improvement area and four previously recorded occurrences within a one-mile radius of the South Boundary Road improvement area.

### California horned lizard

The coast (California) horned lizard is a CDFG species of special concern but is not a target species under the Fort Ord HMP and has no state or federal listing status. The California horned lizard is a large lizard with five head spines projected toward the posterior. This species inhabits valleys, foothills, and semiarid mountains from sea level up to 8,000 feet

(2,438 meters) in elevation and is found grassland, coniferous forest, woodland, and chaparral habitats with open areas and patches of loose soil. This species is associated with habitats that contain a sandy substrate that they can burrow into and supports their prey base of ants and beetles. This subspecies ranges in the Central Valley from southern Tehama County south, in the Sierra foothills from Butte County to Tulare County below 4,000 feet; below 6,000 feet in the mountains of southern California exclusive of desert regions; and throughout the Coast Ranges south from Sonoma County. California horned lizards typically breed during April and the hatchlings first appear during July and August. California lowland populations are in decline primarily due to urban and agricultural expansion.

Within the project area, the maritime chaparral, coastal scrub, and coastal oak woodland are potential habitat for the California horned lizard. There are five previously recorded occurrences within a five-mile radius of the Gigling Road improvement area; these same five recorded occurrences are located within a ten-mile radius of the South Boundary Road improvement area.

**American badger**

The American badger is a California species of special concern with no state or federal listing status. This species is not a target species under the Fort Ord HMP. The geographic distribution of the American badger is from Alberta southward to central Mexico and eastward from the Pacific coast to Ohio. This species ranges throughout the state of California, but are absent from humid coastal forests of Del Norte and Humboldt Counties. Suitable habitat for badgers is characterized by grasslands, shrublands, mountain meadow, and open stages of most habitats with dry soil. Badgers dig burrows in soil for cover, or reuse old burrows. They prey mostly on fossorial rodents such as ground squirrels. They will also eat a variety of other animals including mice, woodrats, birds, and insects.

Within the project area, maritime chaparral and coastal scrub provides potential habitat for the American badger. There are two previously recorded occurrences within a one-mile radius of the South Boundary Road improvement area and seven previously recorded occurrences within a five-mile radius of the Gigling Road improvement area; six of these occurrences are overlapping between the two improvement areas.

*Sensitive Habitats, Including Critical Habitat*

Sensitive habitats include the following: areas of special concern to resource agencies; areas protected under the California Environmental Quality Act (CEQA); areas designated as sensitive natural communities by CDFG; areas outlined in Section 1600 of the CDFG Code; areas regulated under Section 404 of the federal Clean Water Act (CWA); areas protected under Section 402 of the CWA; and areas protected under local regulations and policies. The oak woodland and maritime chaparral habitats found within the project area are considered to be sensitive habitats protected by various agencies. There are no riverine, riparian, or wetland habitats within the project area.

The term "oak woodland" refers to an oak stand with greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover (Oak Woodland Conservation Act, Fish and Game Code Section 1361). Coast live oak woodland habitat within the project area has more than 10 percent canopy cover (mapped as "coastal oak woodland"). Although this habitat type does not have a threatened state rank, it is a habitat of concern to CDFG. Oak woodlands are rapidly disappearing in California and further elimination would result in significant adverse impacts according to CEQA.

The maritime chaparral habitat located within the project area, defined as central maritime chaparral by CDFG and the *Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995), is considered by CDFG to be rare or uncommon but not imperiled (state rank 2.2 – threatened, between 2,000 and 10,000 acres). This rare habitat is located only in areas with a predominance of summer fog. Maritime chaparral is a threatened habitat type that is protected by many agencies along the coast of California.

According to the USFWS, a critical habitat is a specific area that is essential for the conservation of a federally listed species and may require special management considerations or protection. Critical habitat has been designated for Monterey spineflower, California red-legged frog, and the south/central California coast ESU for steelhead within five miles of the project area. No critical habitat has been designated or proposed within the project area.

*Wildlife Movement Corridors*

Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link otherwise fragmented acres of undisturbed area. Maintaining the continuity of established wildlife corridors is important to: a) sustain species with specific foraging requirements; b) preserve a species' distribution potential; and c) retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource. The South Boundary Road improvement area parallels or includes the existing roadway. While the natural habitats within the project area are used by common wildlife species for various life-history requirements (foraging, nesting, resting/perching), the project area does not contain connected expanses of open space, riparian corridors, or drainages which may be used by wildlife species as movement corridors. In addition, the Gigling Road improvement area is surrounded by development thereby limiting any movement by wildlife.

*Protected Trees*

Based on the known history of disturbance in the vicinity of the project area, it is assumed that the Monterey pine trees observed within the South Boundary improvement area are non-native (i.e., planted as ornamental trees and come from nursery stock). However, some of these trees are likely to be protected under the tree ordinances for the cities of Del Rey Oaks and/or Monterey (see Regulatory Framework discussion). Along Gigling Road, a

number of Monterey pine and Monterey cypress trees were observed; however, these trees were planted as ornamentals. Any Monterey cypress or Monterey pine trees that have been planted are not considered protected native species. Therefore, these CNPS List 1B trees are not considered to have special-status under CEQA. However, the Monterey pine and Monterey cypress trees within the Gigling Road improvement area are protected under the City of Seaside's tree ordinance.

An arborist survey has not been performed within the project area. As such, an exact count of trees impacted by the proposed action/project is not possible at this time. As noted above, the South Boundary Road improvement area contains a large number of coast live oak trees within the coastal oak woodland and maritime chaparral communities and non-native Monterey pine trees at scattered locations.

Within the City of Monterey (eastern portion of South Boundary Road improvement area) trees on vacant lots that are more than two inches in diameter (measured at a point four feet six inches above the tree's natural grade) and more than four inches in diameter on developed lots are considered protected trees, which are subject to conditions of removal/mitigation measure standards provided in Section 37-11 of the *City of Monterey Municipal Code*.

Within the City of Del Rey Oak (western portion of Sound Boundary Road improvement area), all oak and other significant trees are protected. An oak tree being any tree of the *Quercus* genus that has a single trunk that measures more than thirty (30) inches in circumference at two feet above the ground or for multi-trunked trees having two trunks with a circumference of at least 40 inches at two feet above the root crown. Coast live oak trees, as well as the non-native Monterey pine and Monterey cypress trees are located within the Gigling Road improvement area, but occur largely as planted ornamentals. Coast live oak trees are also located within the small coastal oak woodland at the east end of the Gigling Road improvement area.

Within the City of Seaside (Gigling Road improvement area), all trees, including non-native Monterey pine and cypress trees, that are at least ten feet in height above ground, or that are six inches or greater diameter at breast height, are currently protected under the City of Seaside's tree ordinance, require an application for removal, and replacement at a 1:1 ratio.

*Special Status Birds*

Several special-status bird species suspected to occur in the vicinity could forage and/or nest in the project area. The California horned lark (*Eremophila alpestris actia*) is a ground-nester and the California burrowing owl *(Athene cunicularia)* nests in abandoned ground squirrel burrows. These are CSC species and their nesting habitat is of primary concern. No evidence of nests was observed in the project area; however, these protected birds could utilize the coast live oak woodland habitat in the project area.

*Special Status Bats*

There are four special-status bat species with ranges in Monterey County that are known to utilize buildings or trees for roosts. These species include: Townsend's western big-eared bat (*Plecotus townsendii*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis*), and long-legged myotis (*Myotis volans*). All of these bats are CSC species. The coast live oak woodland within the project area could provide suitable roosting habitat for these bat species. Although, due to the level of disturbance for ordinance clearing, etc., it is unlikely that bats would roost in or nearby the project area.

**Regulatory Framework**

Federal

*Endangered Species Act*

Provisions of the federal Endangered Species Act (FESA), as amended (16 USC 1531), protect federally listed threatened and endangered species and their habitats from unlawful take. "Take" under the FESA includes activities such as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." U.S. Fish and Wildlife Service (USFWS) regulations define harm to include some types of "significant habitat modification or degradation." In the case of *Babbitt, Secretary Of Interior, et al., Petitioners v. Sweet Home Chapter Of Communities For A Great Oregon, et al.* (No. 94-859) (U.S. Supreme Court 1995), the United States Supreme Court ruled on June 29, 1995, that "harm" may include habitat modification "...where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering."

For projects with a federal nexus, Section 7 of the FESA requires that federal agencies, in consultation with the USFWS or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries), use their authorities to further the purpose of the FESA and to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in destruction or adverse modification of critical habitat. Section 10(a)(1)(B) allows non-federal entities to obtain permits for incidental taking of threatened or endangered species through consultation with USFWS or NOAA Fisheries. In general, NOAA Fisheries is responsible for protection of federally listed marine species and anadromous fish while other listed species come under USFWS jurisdiction.

*Migratory Bird Treaty Act*

Migratory birds are protected under the Migratory Bird Treat Act (MBTA) of 1918 (16 USC 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The vast majority of birds found in the project area are protected under the MBTA.

State

*California Endangered Species Act*

Under the California Endangered Species Act (CESA), the California Department of Fish and Game (CDFG) has the responsibility for maintaining a list of endangered and threatened species (California Fish and Game Code 2070). CDFG maintains a list of "candidate species" which are species that CDFG formally notices as being under review for addition to the list of endangered or threatened species. CDFG also maintains lists of "species of special concern" which serve as species "watch lists." Pursuant to the requirements of CESA, an agency reviewing a proposed action/project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project site and determine whether the proposed action/project will have a potentially significant impact on such species. In addition, CDFG encourages informal consultation on any proposed action/project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under CDFG Code Section 206.591 in the form of an Incidental Take Permit.

*California Department of Fish and Game*

**Native Plant Protection Act**

The Native Plant Protection Act (CDFG Code Sections 1900-1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by CDFG). However, the Act allows landowners, under specified circumstances, to take listed plant species provided that they first notify CDFG and give at least 10 days for the CDFG to come and retrieve the plants before they are plowed under or otherwise destroyed. In addition, CDFG Code Section 1913 exempts from "take" prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way." Project impacts to these species would not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

**Birds of Prey**

Under Section 3503.5 of the CDFG Code it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

**"Fully Protected" Species**

Sections 3500 to 5500 of the CDFG Code outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Fully protected species may not be taken or

possessed at any time. The CDFG cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Pursuant to the requirements of CESA, an agency reviewing a proposed action/project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project study area and determine whether the proposed action/project will have a potentially significant impact on such species. In addition, CDFG encourages informal consultation on any proposed action/project that may impact a candidate species.

Project related impacts to species on the CESA endangered or threatened list would be considered a significant impact. State listed species are fully protected under the mandates of the CESA. Take of protected species incidental to otherwise lawful management activities may be authorized under CDFG Code Section 206.591 in the form of an Incidental Take Permit.

Non-Governmental Agency

*California Native Plant Society*

The California Native Plant Society (CNPS) is a non-governmental agency that classifies native plant species according to current population distribution and threat-level, in regards to extinction. The following description of the CNPS classification system is relevant to identifying potential impacts to biological resources due to implementation of the proposed project. The CNPS maintains a list of plant species native to California that has low numbers, limited distribution, or are otherwise threatened with extinction. Potential impacts to populations of CNPS listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

- List 1A: Plants believed to be extinct
- List 1B: Plants that are rare, threatened, or endangered in California and elsewhere
- List 2: Plants that are rare, threatened, or endangered in California, but are more numerous elsewhere

All of the plant species on List 1 and List 2 meet the requirements of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (CESA) of the CDFG Code and are eligible for state listing. Plants appearing on List 1 or List 2 are considered to meet the criteria of CEQA Section 15380 and effects on these species are considered "significant" in this environmental review. Classifications for plants listed under "List 3: Plants about which we need more information (a review list)" and/or "List 4: Plants of limited distribution (a watch list)," as defined by CNPS, are not currently protected under state or federal law.

Local

*Former Fort Ord Habitat Management Plan (HMP)*

The *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord* (USACE 1997) establishes a habitat conservation area corridor system, and parcel-specific land use categories and management requirements for all lands on former Fort Ord. Four general categories of parcel-specific land use are identified: "Habitat Reserve," "Habitat Corridor," "Development with Reserve Areas or Restrictions," and "Development with no Restrictions." Resource conservation and management requirements and responsible parties for each parcel or group of parcels with habitat designations are discussed in Chapter 4 of the HMP.

A general goal of the HMP is to promote preservation, enhancement, and restoration of habitat while allowing implementation of a community-based reuse plan that supports economic recovery after closure of Fort Ord. The HMP assumes a reuse development scenario for the entire base that will result in the removal of up to 6,300 acres of existing vegetation and wildlife habitat. Losses to up to 18 special-status species (HMP Species) are also accounted for by the HMP. The establishment of approximately 16,000 acres of habitat reserves with about 400 additional acres of connecting habitat corridors is the primary measure to minimize the impacts of reuse on HMP Species. The HMP further conditions development on approximately 2,200 additional acres by requiring reserve areas or restrictions on those lands.

The USFWS found that the HMP for the former Fort Ord fulfills reasonable and prudent measures as stated in the *Biological Opinion for the Disposal and Reuse of Fort Ord, Monterey County, California* dated October 19, 1993. However, the HMP does not authorize incidental take by entities acquiring land at the former Fort Ord of any species listed as threatened or endangered under the federal ESA of 1973, as amended. In order to receive authorization for incidental take through Section 10(a)(1)(B) permits, entities must submit to the USFWS the HMP in combination with additional documentation, including an implementation agreement by all parties receiving lands that are to be managed for wildlife values.

According to the HMP, the proposed action/project is located within parcels designated as "Development". There parcels have no management restrictions and any biological resources found are not considered essential to the long-term preservation of sensitive species at former Fort Ord.

*Fort Ord Reuse Plan (BRP)*

The entire project area is located within the boundaries of the former Fort Ord. The *BRP* Conservation Element contains several policies related to biological resources within the City of Seaside. The BRP and the City of Seaside's land use plan contain parallel policies concerning biological resources within the project area. The following *BRP* policies would be applicable to the Gigling Road improvements.

**BRP Biological Resources Policy A-1 (City of Seaside):** The City shall ensure that the habitat management areas are protected from degradation due to development in, or use of, adjacent parcels within its jurisdiction.

**BRP Biological Resources Policy A-4 (City of Seaside):** The City shall encourage the preservation of small pockets of habitat and populations of HMP species within and around developed areas.

**BRP Biological Resources Policy B-1 (City of Seaside):** The City shall strive to avoid or minimize the loss of (non-HMP species) that are known or expected to occur in areas planned for development.

**BRP Biological Resources Policy C-1 (City of Seaside):** The City shall encourage that grading for projects in undeveloped lands be planned to complement surrounding topography and minimize habitat disturbance.

**BRP Biological Resources Policy C-2 (City of Seaside):** The City shall encourage the preservation and enhancement of oak woodland elements in the natural and built environments.

**BRP Biological Resources Policy C-3 (City of Seaside):** Lighting of outdoor areas shall be minimized and carefully controlled to maintain habitat quality for wildlife in undeveloped natural lands. Street lighting shall be as unobtrusive as practicable and shall be consistent in intensity throughout development areas adjacent to undeveloped natural lands.

**BRP Biological Resources Policy D-1 (City of Seaside):** The applicant shall implement a contractor education program that instructs construction workers on the sensitivity of biological resources in the vicinity and provides specifics for certain species that may be recovered and relocated from particular development areas.

**BRP Biological Resources Policy D-2 (City of Seaside):** The City shall encourage and participate in the preparation of educational materials through various media sources, which describe the biological resources on the former Fort Ord, discuss the importance of the HMP and emphasize the need to maintain and manage the biological resources to maintain the uniqueness and biodiversity of the former Fort Ord.

*City of Seaside*

The Gigling Road improvement area is located within the City of Seaside; therefore the following sections of the *City of Seaside Municipal Code* would be applicable to the Gigling Road improvements.

**Municipal Code Section 8.54.020:** Trees that are protected by this ordinance include all trees with a height of at least ten feet or with a circumference of at least 20 inches measured at 24 inches above the ground.

**Municipal Code Section 8.54.070:** All removed trees must be replaced with a minimum five-gallon approved specimen tree of a species and in an approved location.

**Municipal Code Section 8.54.080:** Requires protection of trees during construction activities.

*City of Del Rey Oaks*

The western portion (approximately 6,433 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Del Rey Oaks. Therefore, the following General Plan policies would be applicable to the South Boundary Road improvements.

**General Plan Policy C/OS-3:** Wildlife habitat and wildlife corridors shall be preserved.

**General Plan Policy C/OS-4:** Significant strands of riparian vegetation shall be subject to only minimal cutting and removal and then only when proven unavoidable.

**General Plan Policy C/OS-5a:** Encourage the conservation and preservation of irreplaceable natural resources and open space at former Fort Ord.

**General Plan Policy C/OS-5e:** The City shall ensure that all habitat conservation and corridor areas identified in the HMP area protected from degradation due to development within or adjacent to these areas. This shall be accomplished by assuring that all new development in the Fort Ord Reuse Area adheres to the management requirements of the HMP and the policies of the BRP.

**General Plan Policy C/OS-5f:** The City shall encourage the preservation of small pockets of habitat and population of special status species within and around developed areas, in accordance with the recommendations of the HMP and BRP. This shall be accomplished by requiring project applicants to conduct surveys to verify sensitive species and/or habitat on the site and developing a plan for avoiding or salvaging these resources, where feasible.

### City of Del Rey Oaks Tree Ordinance

Chapter 12.16 of the *City of Del Rey Oaks Municipal Code* provides regulations that control the removal, protection, and preservation of trees within the City. The provisions within the chapter apply to all oak and other significant trees on all public and private property within the city. Section 12.16.030 states that in the context of Chapter 12.16 that

an oak tree means any tree of the Quercus genus that has a single trunk that measures more than thirty (30) inches in circumference at two feet above the ground or for multi-trunked trees having two trunks with a circumference of at least 40 inches at two feet above the root crown. Section 12.16.060 provides the standards for granting a tree removal permit based on the following findings:

A. The condition of the tree with respect to disease, danger of falling, and the proximity to existing or proposed structures;

B. The necessity to remove a tree in order to construct proposed improvements to prevent economic hardships to the owner of the property. The burden of proof shall be the responsibility of the applicant at the time of the application to remove the tree;

C. The topography of the land, the effect of tree removal on erosion, soil retention, and the diversion or increased flow of surface water;

D. The number of trees exiting the neighborhood. Decisions shall be guided by the standards established in the neighborhood and the effect of the tree removal upon property value in the area; and

E. Good forestry practices, such as the number of health trees which a given parcel of land or are can support.

Section 12.16.050.D of the City of Del Rey Oaks Municipal Code provides conditions of tree removal permits.

*City of Monterey*

The eastern portion (approximately 1,160 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Monterey. Therefore, the following General Plan policies would be applicable to the South Boundary Road improvements.

> **General Plan Urban Design – Wooded Skyline and Foothills Policy b.3:** Trees in forested areas should be preserved, and denuded areas should be reforested where feasible.
>
> **General Plan Conservation – Flora and Fauna and Marine Resources Policy d.1:** Protect existing native plants and promote the use of locally occurring, native vegetation for public and private landscaping and revegetation efforts.
>
> **General Plan Conservation – Flora and Fauna and Marine Resources Policy d.3:** Protect existing sensitive habitats by careful planning to avoid and/or mitigate significant impacts to habitat areas identified as having high and moderate biological values.

**General Plan Conservation – Flora and Fauna and Marine Resources Policy d.4:** Protect and manage habitats that support special-status species, are of high biological diversity, or are unusual or regionally restricted. Prepare biotic reports or habitat management plans as needed to ensure protection of habitat values.

**General Plan Conservation – Flora and Fauna and Marine Resources Policy d.5:** Reduce biotic impacts to a less-than-significant level on project sites by ensuring that mitigation measures identified in biotic reports are incorporated as conditions of approval for development projects. Compliance with the City Tree Ordinance is the mechanism that will be used to address impacts of tree removals. As mitigation for significant impacts, avoidance, replacement, restoration of habitats on or off-site or other measures may be required.

**General Plan Conservation – Flora and Fauna and Marine Resources Policy d.6:** Within identified habitat areas with high biological value, the City will provide for a focused evaluation of areas identified as appropriate habitat for special-status species during the project review and approval process.

### City of Monterey Tree Ordinance

Chapter 37 of the *City of Monterey Municipal Code* provides regulations that control the removal, protection, and preservation of trees within the City. The provisions within the chapter apply to all protected trees, which are a) trees located on a vacant private parcel that are more than two inches in diameter when measured at a point four feet six inches above the tree's natural grade; and b) trees located on a private, developed parcel that are more than six inches when measured a t a point four feet six inches above the tree's natural grade. Section 37-3 prohibits the removal or damage to any tree in the public right-of-way unless pursuant to a permit issued by the City Forester. According to Section 37-10(B) of the City of Monterey Municipal Code, a tree removal permit may be approved, denied, or conditionally approved based the following findings:

(1) The condition of the tree with respect to disease; hazardous conditions caused by the tree including but not limited to its proximity to existing structures or high pedestrian traffic areas such as parking lots, playgrounds and pedestrian walkways; its status as an undesirable non-native species; or its interference with utility services that cannot be controlled or remedied through reasonable preservation and/or preventive procedures and practices.

(2) The condition of the tree as a host to a plant, or insect, or other parasitic organism which endangers other adjacent healthy trees.

(3) The number of healthy trees the parcel is able to support as determined by the City Forester based on such considerations as tree species, growth characteristics, general health of the stand, tree age, solar orientation and soil condition.

(4) The acceptance of mitigation measures including, but not limited to, those set forth in section 37-11 below.

(5) The value and importance of the tree on the site or in the community, based on such factors as its service as part of a windbreak system, its assistance in drainage or in the avoidance of soil erosion, its service as a component of a wildlife habitat, or its role in maintaining the existing urban forest.

Section 37-11 of the City of Monterey Municipal Code provides conditions of removal/mitigation measure standards that may be imposed on any proposed tree removal.

## Cultural Resources

### Environmental Setting

The former Fort Ord is located within lands historically occupied by the Rumsen Indians who belonged to a branch of the Coastanoan, or Ohlone, language family. The traditional Indian lifeways were largely destroyed after colonization by the Spanish beginning in 1770. The first military use of the site occurred in 1917, and Fort Ord became an active installation for the housing and training of Army troops in the 1930s.

Previous archaeological field surveys conducted over the Fort Ord property resulted in mapping of areas of high, medium, and low probability for prehistoric resources. The areas of greatest archaeologically sensitivity include all terraces and benches adjacent to the Salinas River and El Toro Creek, the peripheries of the wet cycle lakes, areas adjacent to streams in the BLM lands (southeast portion of the base), and the coastal beaches.

Based on the results of the cultural resources investigations prepared for the Army's Fort Ord Disposal and Reuse Plan EIS, the U.S. Army and the California State Historic Preservation Office (SHPO) concluded that two sites within the former base were eligible for listing on the National Register of Historic Places. These include Stilwell Hall, a former enlisted men's club located south and adjacent to the North Basin, which has since been demolished and 35 structures in the East Garrison area, located east of State Route 1.

The project area would have provided a favorable environment for Native Americans during the prehistoric period, as it was adjacent to the Monterey Bay with riparian and inland resources available immediately inland to the aboriginal population.

### Regulatory Framework

Federal and State

The proposed action/project is subject to the legal requirements of Section 106 of the National Historic Preservation Act (NHPA) 1966 and its implementing regulations, as amended, and the California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq.) 1970, as amended.

Local

*Fort Ord Reuse Plan*

The entire project area is located within the boundaries of the former Fort Ord and the *BRP* Conservation Element contains several policies related to cultural resources within the City of Seaside. Therefore, the following *BRP* policies would be applicable to the Gigling Road improvements:

**BRP Cultural Resources Policy A-1 (City of Seaside):** The City of Seaside shall ensure the protection and preservation of archaeological resources at the former Fort Ord.

**BRP Cultural Resources Program A-1.1 (City of Seaside):** The City of Seaside shall conduct a records search and a preliminary archaeological surface reconnaissance as a part of environmental review for any development project(s) proposed in a high archaeological resource sensitivity zone.

**BRP Cultural Resources Program A-1.2 (City of Seaside):** The City of Seaside shall require that all known and discovered sites on the former Fort Ord with resources likely to be disturbed by a proposed action/project be analyzed by a qualified archaeologist with local expertise, recommendations made to protect and preserve resources and, as necessary, restrictive covenants imposed as a condition of project action or land sale.

**BRP Cultural Resources Program A-1.3 (City of Seaside):** As a contractor work specification for all new construction projects, the City of Seaside shall include that during construction, upon the first discovery of any archaeological resource or potential find, development activity shall be halted within 50 meters of the find until the potential resources can be evaluated by a qualified professional archaeologist and recommendations made.

**BRP Cultural Resources Policy A-2 (City of Seaside):** The City of Seaside shall provide for protection and/or support of Native American cultural properties at the former Fort Ord.

**BRP Cultural Resources Program A-2.1 (City of Seaside):** The City of Seaside shall coordinate with the California Native American Heritage Commission and California Native American points of contact for this region to identify traditional cultural properties located on former Fort Ord lands.

**BRP Cultural Resources Program A-2.2 (City of Seaside):** If traditional cultural properties are found to exist on the City's lands at the former Fort Ord, the City of Seaside shall ensure that deeds transferring Native American traditional properties include covenants that protect and allow Native Americans access to these properties. These covenants will be developed in consultation with interested Native American groups, the State Historic Preservation Officer, and the Advisory

Council on Historic Preservation. Leases will contain clauses that require compatible use and protection as a condition of the lease.

*City of Seaside*

The entire Gigling Road improvement area is located within the boundaries of the City of Seaside; therefore the following General Plan policy would be applicable.

> **General Plan Policy COS-5.1:** Identify and conserve archeological, architectural, and historic resources within Seaside.

*City of Del Rey Oaks*

The western portion (approximately 6,433 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Del Rey Oaks. Therefore, the following General Plan policies would be applicable to the South Boundary Road improvements.

> **General Plan Policy C/OS-15:** If development of a site uncovers cultural resources, the recommendations of Appendix K [City of Del Rey Oak General Plan], of the Guidelines for Implementation of the California Environmental Quality Act shall be followed for identification, documentation, and preservation of the resource.

> **General Plan Policy C/OS-16:** The city shall document and record data or information relevant to prehistoric and historic cultural resources that may be impacted by proposed development. The accumulation of such data shall act as a tool to assist decisions makers in determinations of the potential development effects to prehistoric and historic resources located within the City.

## Geology and Soils

### Environmental Setting

Soil

Most soils at former Fort Ord were formed by deposition of sand during the rising and falling sea levels associated with the ice ages of the mid-and late Pleistocene Epoch. Nearly 200 feet of sand were deposited in some areas, creating the sandstone and compacted sandy soils common throughout the base. More recently, very high dunes have developed along the coast as coastal beach and recent-age dune deposits.

The surficial geology is Older Stabilized Dune and Drift Sand in the vicinity of Gigling Road and Older Stabilized Dune and Drift Sand, Older Alluvium, and Aromas Red Sand in the vicinity of South Boundary Road. The Older Stabilized Dune and Drift Sand are generally poorly graded sand that does not contain fluvial deposits and are consistent with Aromas sand soil series. The Older Alluvium is unconsolidated, poorly graded silt and sand with lenses of clay and silty clay and may have large amounts of gravel. The Aromas Red Sand is yellowish brown to reddish brown fine grained sand deposited by the wind.

*Soils Characteristics*

The project area is located on an alluvial terrace of the Salinas River. According to the *Fort Ord Reuse Plan EIR* and the *Monterey County Soil Survey*, soils within the project area are comprised of Oceano loamy sand, 2 to 15 percent slopes (OaD), Arnold-Santa Ynez complex (Ar), and Baywood sand, 2 to 15 percent slopes (BbC). The Oceano series consists of excessively drained soils that formed from stabilized eolian (wind deposited) sands that formed hills with slopes varying from 2 to 15 percent. The Oceano series has high permeability, low runoff potential and an erosion hazard of moderate. The Baywood series consists of somewhat excessively drained soils that formed in stabilized sand dunes with slopes varying from 2 to 15 percent. The Baywood soil series has rapid permeability, low runoff potential with an erosion hazard of slight to moderate. The Arnold-Santa Ynez series consists of moderately well drained soils that formed terraces from weathered sand stone with slopes varying from 9 to 30 percent. The Arnold-Santa Ynez series has high permeability, moderate runoff potential with an erosion hazard of moderate to severe.

The *Fort Ord Reuse Plan EIR* determined that certain soil types on the former Fort Ord, including the Baywood and Oceano soils found on the project site, would be subject to severe limitations for construction. Policies and programs in the *BRP* were found to reduce this impact to a less than significant level.

*Soil Profile*

Soil sampling was conducted by Pacific Crest Engineering, Inc. in 2007 to characterize the soil profile within the project area. Seven 6-inch diameter soil borings were drilled within the project area in August 2007 to test for the following: moisture density; direct shear; unconfined compression; "R" value; gradation; corrosivity; pH; resistivity; chloride concentration and sulfate concentration.

There were three soil borings (#1 - #3) taken along the south side of Gigling Road and four soil borings (#4 - #7) taken along the south side of South Boundary Road. The soil boring locations are shown in **Appendix F** of this EA/IS. Based on the soil borings #1 - #3, the soil underlying Gigling Road are composed of very fine to medium grained sand with varying amounts of silt, which was found to be loose to very dense. Groundwater was not encountered in any of the borings to a maximum explored depth of 21.5 feet. Based on soil borings #4 - #7, the soil underlying South Boundary Road are composed of silt and very fine to fine grained sand with various amounts of silt and silt, which was found to be medium dense to very dense. In soil boring #7, grasses were observed at a depth of 6.5 feet. No free groundwater was encountered within any of the borings to the maximum depth drilled of 21.5 feet.

*Shrink Swell Potential*

Shrink swell potential refers to the change in the volume of soil material those results from a change in the moisture content of the soil. Much damage to building foundations, roads, and other structures is caused by the shrinking and swelling of soils as they become wet

and dry. According to Pacific Crest Engineering, Inc., the surface soils have low expansive properties. Therefore, the potential for shrink swell would be considered low.

*Erosion Potential*

Erosion is a natural process caused by wind, water, or gravitational forces. This process generally creates two problems: 1) soil removal, or erosion of soil from a site and its subsequent deposit to another site; and 2) sedimentation. The hazard of surface runoff and erosion are high once grading begins and vegetation is removed from the project area. Sediment that is washed into surface waters from construction sites is regarded as the greatest single pollutant from non-point sources. According to Pacific Crest Engineering, Inc., the soils within the project area are classified as having a high potential for erosion.

*Corrosivity*

Various metals and other materials corrode when they are exposed to the soil, causing whatever structure to weaken. Depending on the materials and soil, the potential for corrosion to occur varies. Caltrans considers soils to be corrosive to foundation materials if the chloride concentration is greater than or equal to 500 parts per million (ppm), or the sulfate concentration is greater than or equal to 2,000 ppm, or the soil pH is 5.5 or less. According to Pacific Crest Engineering, Inc., the soils at the project site are classified as being non-corrosive based on Caltrans guidelines.

Geology

The entire Monterey Bay area is located in a seismically active region and is subject to strong ground shaking during an earthquake on any of the regional fault systems. Four active fault zones are located in the vicinity of the project area including: the San Andreas fault zone, the Palo Colorado—Sur fault, Riconada fault, and the Monterey Bay-Tularcitos fault zone. The San Andreas fault zone is located approximately 20 miles and 24 miles northeast of Gigling Road and South Boundary Road, respectively. The Palo Colorado—Sur fault is located approximately 14 miles and 11 miles southwest of Gigling Road and South Boundary Road, respectively. The Riconada fault is located approximately 3 miles and 7 miles northeast of Gigling Road and South Boundary Road, respectively. The Monterey Bay-Tularcitos fault zone is located approximately 5 miles and 2 miles southwest of Gigling Road and South Boundary Road, respectively. The maximum credible earthquake magnitude is greater than 7.0 for the Monterey Bay-Tularcito and Palo-Colorado-Sur fault zones, greater than 7.5 for the Rinconada fault, and greater than 8.0 for the San Andreas Fault.

Severe ground shaking from a major earthquake in the project area could experience more destructive shaking, with higher amplitude and lower frequency, than structures founded on bedrock. Thick soft soil deposits large distances from earthquake epicenters may result in seismic accelerations significantly greater than expected in bedrock. However, structures built in accordance with the latest edition of the California Building Code lower the potential for structural damage caused by ground shaking. According to Pacific Crest

Engineer, Inc., the potential for ground surface fault rupture, and seismically induced liquefaction, lateral spreading and/or landsliding is low.

Topography

The topography at the project site is rolling with slopes within the project ranging from level to approximately four percent.

**Regulatory Framework**

State

*California and Uniform Building Code (Title 24)*

The California Building Code (Title 24) and the Uniform Building Code provide standards for testing and building construction, as well as safety measures for development within earthquake prone areas. Table 16-J of the 1997 California Uniform Building Code (UBC) requires that a site be classified into one of five soil profile types. These soil profile types are based on the average shear wave velocity of the upper 30 meters, or Standard Penetration Test (SBT) blow counts, or undrained shear strength. Soil Profile Types of $S_F$ require site-specific evaluation per §1629.31 UBC.

*Alquist-Priolo Special Studies Act*

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. This state law was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides.

The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. ["Earthquake Fault Zones" were called "Special Studies Zones" prior to January 1, 1994.] The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. Single-family wood-frame and steel-frame dwellings up to two stories that are not part of a development of four units or more are exempt. However, local agencies can be more restrictive than state law requires.

Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. A licensed geologist must prepare an evaluation and written report for a specific site. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet).

Local

*Fort Ord Reuse Plan (BRP)*

The entire project area is located within the boundaries of the former Fort Ord. The *BRP* Conservation and Safety Elements contains several policies related to geology and soils within the City of Seaside. The following *BRP* policies are applicable to the Gigling Road improvements:

**BRP Soils and Geology Policy A-2 (City of Seaside):** The City shall require developers to prepare and implement erosion control and landscape plans for projects that involve high erosion risk. Each plan shall be prepared by a registered civil engineer or certified professional in the field of erosion and sediment control and shall be subject to the approval of the public works director for the City of Seaside. The erosion component of the plan must at least meet the requirements of Storm Water Pollution Prevention Plans (SWPPPs) required by the California State Water Resources Control Board.

**BRP Soils and Geology Policy A-3 (City of Seaside):** Through site monitoring, the City shall ensure that all measures included in the developer's erosion control and landscape plans are properly implemented.

**BRP Soils and Geology Policy A-4 (City of Seaside):** The City shall continue to enforce the Uniform Building Code to minimize erosion and slope instability problems.

**BRP Soils and Geology Policy A-5 (City of Seaside):** Before issuing a grading permit, the City shall require that geotechnical reports be prepared for developments proposed on soils that have limitations as substrates for construction or engineering purposes, including limitations concerning slope and soils that have piping, low-strength, and shrink-swell potential. The City shall require that engineering and design techniques be recommended and implemented to address these limitations.

**BRP City of Seaside Soils and Geology Policy C-2 (City of Seaside):** The City shall consider the compatibility with existing soil conditions of all habitat restoration, enhancement, and preservation programs undertaken within the City.

**BRP City of Seaside Seismic and Geologic Hazards Policy A-2 (City of Seaside):** The City shall use the development review process to ensure that potential seismic or geologic hazards are evaluated and mitigated prior to construction of new projects.

**BRP City of Seaside Soils and Geology Program A-2.1 (City of Seaside):** The City shall require geotechnical reports and seismic safety plans when development projects or other area plans are proposed within zones that involve high or very

high seismic risk. Each plan shall be prepared by a certified geotechnical engineer and shall be subject to the approval of the Planning Director for the City of Seaside.

**BRP City of Seaside Soils and Geology Program A-2.2 (City of Seaside):** Through site monitoring, the City shall ensure that all measures included in the project's geotechnical and seismic safety plans are properly implemented and a report shall be filed and on public record prepared by the Planning Director and/or Building Inspector confirming such.

**BRP City of Seaside Soils and Geology Program A-2.3 (City of Seaside):** The City shall continue to updated and enforce the Uniform Building Code to minimize seismic hazards impacts from resulting from earthquake induced effects such as ground shaking, ground rupture, liquefaction, and or soils problems.

**BRP City of Seaside Seismic and Geologic Hazards Policy A-2 (City of Seaside):** The City shall use the development review process to ensure that potential seismic or geologic hazards are evaluated and mitigated prior to construction of new projects.

**BRP City of Seaside Seismic and Geologic Hazards Program A-2.1 (City of Seaside):** The City shall require geotechnical reports and seismic safety plans when development projects or other area plans are proposed within zones that involve high or very high seismic risk. Each plan shall be prepared by a certified geotechnical engineer and shall be subject to the approval of the Planning Director for the City of Seaside.

**BRP City of Seaside Seismic and Geologic Hazards Program A-2.2 (City of Seaside):** Through site monitoring, the City shall ensure that all measures included in the project's geotechnical and seismic safety plans are properly implemented and a report shall be filed and on public record prepared by the Planning Director and/or Building Inspector confirming such.

**BRP City of Seaside Seismic and Geologic Hazards Program A-2.3 (City of Seaside):** The City shall continue to updated and enforce the Uniform Building Code to minimize seismic hazards impacts from resulting from earthquake induced effects such as ground shaking, ground rupture, liquefaction, and or soils problems.

*City of Seaside*

The entire Gigling Road improvement area is located within the boundaries of the City of Seaside; therefore, the following General Plan policy would be applicable to those improvements.

**General Plan Policy S-1.1:** Reduce the risk of impacts from and seismic and geologic hazards.

*City of Monterey*

The eastern portion (approximately 1,160 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Monterey; therefore, the following General Plan policies would be applicable to those improvements.

**General Plan Conservation – Water Quality Policy b.2:** Minimize particulate matter pollution with erosion and sediment control in waterways and on construction sites and with regular street sweeping on City streets.

**General Plan Conservation – Water Quality Policy b.3:** Minimize development or removal of vegetation on areas particularly susceptible to erosion, such as steep slopes, and require programs to minimize erosion when development occurs in these areas.

**General Plan Safety – Seismic Hazards Policy a.1:** Potentially active faults should be treated the same as active faults until detailed geotechnical data is submitted demonstrating to the City's satisfaction that a fault is not active.

**General Plan Safety – Seismic Hazards Policy a.2:** Engineering and geologic investigations should be undertaken for proposed projects within high and moderate seismic hazard zones before approval is given by the City. The entire City is currently within seismic hazard zone IV and these studies are required for almost all new construction except very minor additions.

**General Plan Safety – Geologic Hazards Policy b.2:** Minimize grading in hillside areas.

**General Plan Program b.2.1:** Limit permits for major grading operations until development plans have been approved by the City and improvement bonds have been posted.

**General Plan Safety – Geologic Hazards Program b.2.2:** Permit grading operations only in areas scheduled for immediate construction or paving.

**General Plan Safety – Geologic Hazards Policy b.3:** Minimize cutting and removal of vegetation during grading operations.

**General Plan Safety – Geologic Hazards Policy b.4:** Require developers to submit slope stabilization plans along with any required grading plans. These slope stabilization plans shall include a complete description of the existing vegetation, the vegetation to be removed and the method of its disposal, the vegetation to be planted, and slope stabilization measures.

**General Plan Safety – Geologic Hazards Policy b.5:** Plant and protect all manufactured slopes, other than those constructed in rock, from the effects of storm runoff erosion within 30 days of the completion of final grading.

**General Plan Safety – Geologic Hazards Policy b.6:** Provide drainage and soil protection for all exposed soil and partially completed roads between October 15 and April 15.

## Hazards and Hazardous Materials

### Environmental Setting

Hazardous Waste

Fort Ord was added to the "National Priorities List of Hazardous Waste Sites" (Superfund List) in 1990. Since then numerous contamination sites have been investigated, remediated, and approved for property transfer by the EPA. Hazardous materials and toxic waste materials and sites at the former Fort Ord consist of a wide variety of materials, including chemicals, petrochemicals, domestic and industrial wastes (landfills), asbestos and lead paint in buildings, above- and underground storage units, and ordinance and explosives, including unexploded ordinance (FORA 1997). The locations of these sites are shown in **Figure 4-5**.

Munitions and Explosives of Concern

Since its establishment in 1917, until the inactivation of the 7th Infantry Division in 1994, Fort Ord was primarily a training and staging facility for the infantry. Many areas of the base have been used for ordinance training. In 1993 an archival investigation was conducted to locate areas where Munitions and Explosive of Concern (MEC) may have been used, which indicated that approximately 12,000 acres are known or suspected to contain MEC. Twenty-nine Munitions Response (MR) sites were identified in the Phase 1 Engineering Evaluation/Cost Analysis (EE/CA). The Phase 2 EE/CA established a process to evaluate the remaining sites. The areas range in size from less than one acre to more than 1,000 acres, although most of the areas are less than 200 acres. The removal process used at Fort Ord is documented in the EE/CAs, which were prepared in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

On March 31, 2007, the U.S. Army and FORA entered into an Environmental Services Cooperative Agreement (ESCA), which allowed the U.S. Army to transfer approximately 3,340 acres on nine parcels of land contaminated with MEC to FORA. An ESCA is a grant mechanism that enables the U.S. Army to provide cleanup funding to a local governmental entity in order to meet state and federal cleanup standards more efficiently than traditional contracts. In accordance with the ESCA, FORA is responsible for addressing all munitions response actions for these nine parcels. The ultimate goal of the ESCA is to expedite the environmental cleanup activities, and transfer, with U.S. Environmental Protection Agency (EPA) and California Department of Toxic Substances Control (DTSC) approval, the munitions impacted property to the local jurisdictions.

*Multi-Range Area*

The ESCA covers four groups of Multi-Range Areas (MRA), which occupy approximately 8,000 acres located in the southwestern portion of the former Fort Ord, as shown in **Figure**

**4-6a**. The MRAs were reportedly used since the opening of the base for ordinance training exercises. Over the years, different types of ordinance were used during training activities at the various ranges within the MRA. The ordinance used included hand grenades, mortars, rockets, mines, artillery rounds, and small arms rounds. Some training activities also involved the use of petroleum hydrocarbons. The MRA has been inactive since the closure of Fort Ord in 1994.

The Gigling Road improvement area is located closest to the Group 1 MRA-Parker Flats (Phase II) and the South Boundary improvement area is located adjacent to and partially within the Group 3 MRA-Del Rey Oaks/Monterey MRA as shown in **Figures 4-6b** and **Figure 4-6c**, respectively. The portion of South Boundary Road that is within Group 3 MRA-Del Rey Oaks/Monterey MRA has potential MEC's. Lands within the MRAs have the highest density of MEC, with specific target areas having the highest densities. Types of MEC found at Fort Ord include artillery projectiles, rockets, hand grenades, land mines, pyrotechnics, bombs, demolition materials, and other items. Known Munitions Response sites are posted with warning signs and are off-limits to unauthorized people. ESCA Remediation Program fieldwork is occurring in Group 1 MRA – Parker Flats, where activity is proceeding from east to west. Clean up of Group 3 MRA-Del Rey Oaks/Monterey MRA is schedule to be done in 2010-2011.

*Del Rey Oaks/Monterey MRA (MRS-43)*

As noted above, a portion of the South boundary improvement area is located within the Del Rey Oaks/Monterey MRA. This area has historically been used as a weapons and troop training area. The Army has performed numerous investigations and removal in the Del Rey Oaks/Monterey MRA (MRS-43). These activities included subsurface sampling investigation; grid sampling; a 4-foot removal action; and geophysical investigations.

Six MEC items were encountered in the northwestern portion of MRS-43 (Parcel L6.2), along the northeastern side of South Boundary Road, and assigned hazard classifications 1, 2 and 3. Four items had a hazard classification of '1', which will cause an injury or, in extreme cases, could cause major injury or death to an individual if functioned by an individual's activities. One item had a hazard classification of '2', which will cause major injury or, in extreme cases, could cause death to an individual if functioned by an individual's activities. One item had a hazard classification of '3', which will kill an individual if detonated by an individual's activities. The MEC are consistent with its documented historical use as a weapons and troop training area.

Airport Hazards

The South Boundary improvement area is located approximately 0.5 miles northeast of the Monterey Peninsula Airport and the Gigling Road Improvement Area is approximately 3 miles southwest of the Marina Municipal Airport. There are no private airports within the vicinity of the project area.

Emergency Response Plan

According to Figure 4.6-2 of the *BRP,* Gigling Road is identified as an emergency evacuation route.

**Regulatory Framework**

Local

*Fort Ord Reuse Plan*

The entire project area is located within the boundaries of the former Fort Ord. The *BRP* Safety Element contains several policies related to hazards within the City of Seaside. The following *BRP* policies would be applicable to the Gigling Road improvements:

> **BRP Fire, Flood, and Emergency Management Policy A-1 (City of Seaside):** The City shall reduce fire hazard risks to an acceptable level by inventorying and assigning risk levels for wildfire hazards and regulating the type, density, location, and/or design and construction of new developments, both public and private.
>
> **BRP Fire, Flood, and Emergency Management Program A-1.1 (City of Seaside):** The City shall incorporate the recommendations of the City Fire Department for all residential, commercial, industrial, and public works projects to be constructed in high fire hazard areas before a building permit can be issued. Such recommendations shall be in conformity with the current applicable Uniform Building Code Fire Hazards Policies. These recommendations should include standards of road widths, road access, building materials, distances around structures, and other standards for compliance with the UCB Fire Hazards Policies.
>
> **BRP Fire, Flood, and Emergency Management Policy A-3 (City of Seaside):** The City shall develop in cooperation with other Fort Ord jurisdictions and the surrounding communities' fire protection agencies, a fire management plan to ensure adequate staff levels, response time, and fire suppression operations in high fire hazard areas of the former Fort Ord. The fire management plan shall also include a fire "fuel management program" in conjunction with the County of Monterey and the Bureau of Land Management.
>
> **BRP Fire, Flood, and Emergency Management Program A-3.1 (City of Seaside):** The City shall develop, with appropriate fire protection agencies, a mutual and/or automatic fire aid agreement to assure the most effective response.
>
> **BRP Fire, Flood, and Emergency Management Program A-3.2 (City of Seaside):** The City shall develop a public education program on fire hazards and citizen responsibility, including printed material, workshops, or school programs, especially alerting the public to wildfire dangers, evacuation routes, fire suppression methods, and fuel management including methods to reduce fire hazards such as bush clearing, roof materials, plant selection, and emergency water storage guidelines.

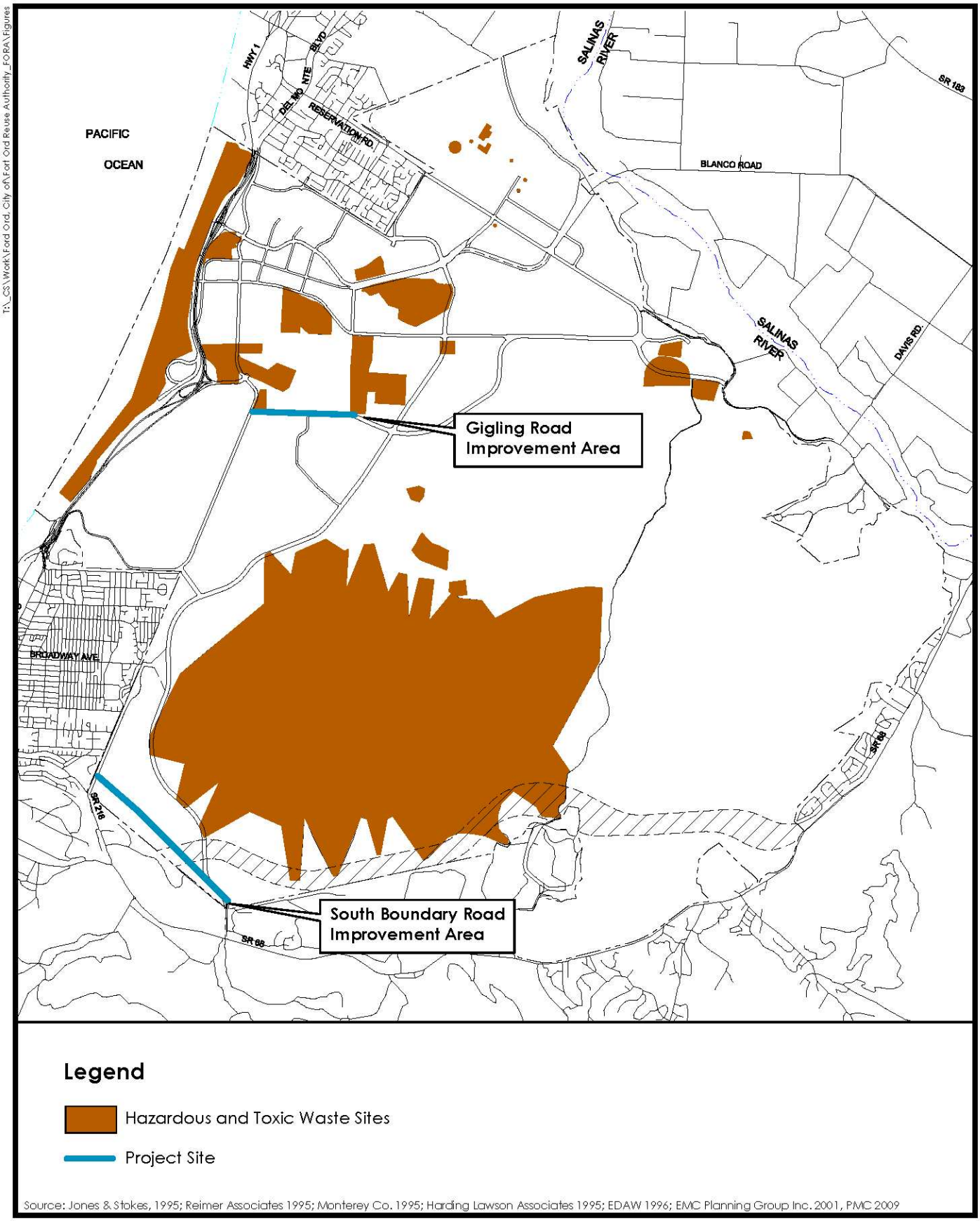


**Figure 4-5**

Former Fort Ord Hazardous and Toxic Waste Sites

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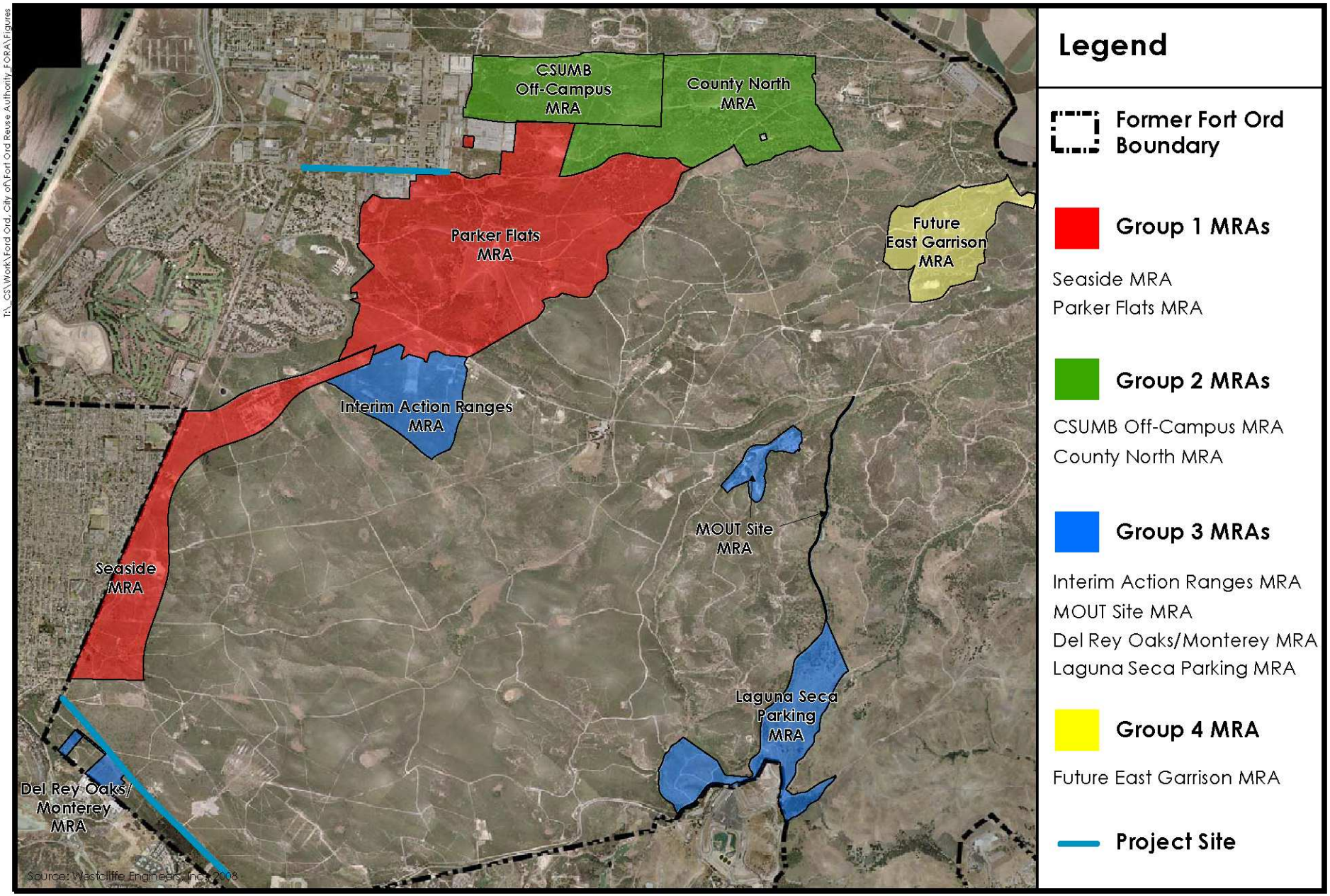


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**Figure 4-6a**

MRAs by Group ESCA Remediation Program

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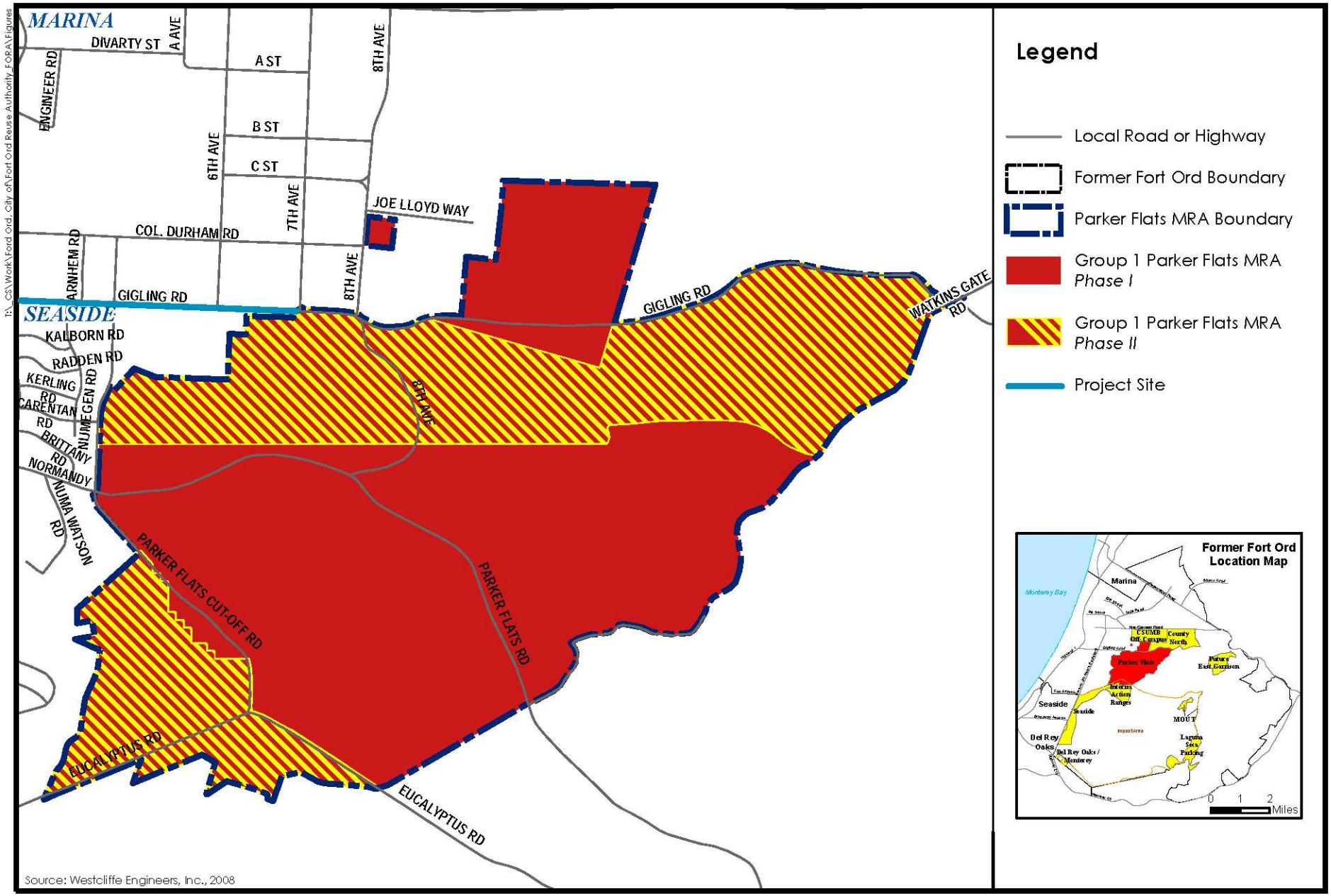


**Figure 4-6b**

Parker Flats MRA (Group 1)

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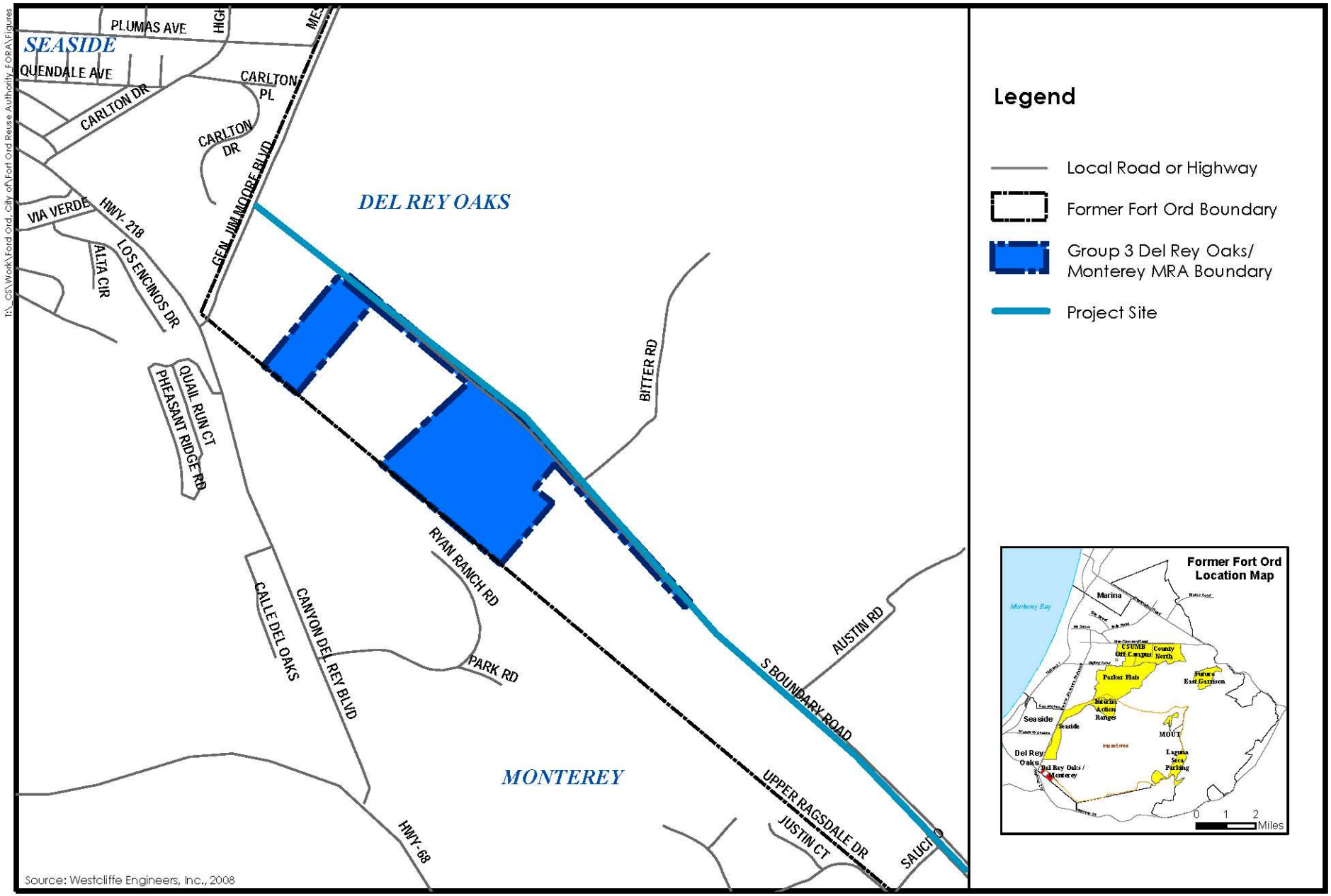


**Figure 4-6c**

Del Rey Oaks/Monterey MRA (Group 3)

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**BRP Fire, Flood, and Emergency Management Policy C-1 (City of Seaside):** The City shall develop an emergency preparedness and management plan, in conjunction with the City of Marina, the County of Monterey, and appropriate fire, medical, and law enforcement agencies.

**BRP Fire, Flood, and Emergency Management Program C-1.1 (City of Seaside):** The City shall identify city emergency evacuation routes and emergency response staging areas with those of the City of Marina and the County of Monterey, and shall adopt the Fort Ord Evacuation Routes Map (See Figure 4.6-2 of the BRP) as part of the city's emergency response plans.

**BRP Hazardous and Toxic Materials Safety Policy B-1 (City of Seaside):** The City shall monitor implementation procedures of the RA-ROD and work cooperatively with the U. S. Army and all contractors to ensure safe and effective removal and disposal of hazardous materials, ensure compliance with all applicable regulations and hazardous materials, and provide for the protection of the public during remediation activities.

*City of Monterey*

The eastern portion (approximately 1,160 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Monterey; therefore, the following General Plan programs would be applicable to those improvements.

**General Plan Safety – Fire Program d.2.1:** Discourage all dead end roads and cul-de-sacs longer than 700 feet.

**General Plan Safety – Fire Program d.2.2:** Encourage alternative second access roads as emergency access for roads greater than 700 feet in length.

## Hydrology and Water Quality

### Environmental Setting

Regional Setting

The former Fort Ord, located between the Salinas and Carmel River watersheds, covers approximately 44 square miles. The area has a moderate Mediterranean climate, receiving 90 percent of its 14.2 inches of annual precipitation from November through April. The topography of former Fort Ord is characterized by stabilized sand dunes in the western half of the base, transitioning to rolling hills and canyons in the eastern half. The sandy soils in the western half of the base are highly permeable and absorb much of the rainfall and runoff without forming distinct creek channels. The streams in the canyons in the eastern part of the base are small and intermittent. A number of creeks drain into the Salinas River. Canyon Del Rey drains the southern portion of the base and empties into Monterey Bay, a designated national marine sanctuary.

Surface water quality of drainage channels within the base varies with the seasons. During the first strong rains of the season, ditches and storm drainage systems draining the urban areas of the base receive the highest concentration of urban pollutants, such as oils, grease, heavy metals, pesticide residues, and coliform bacteria. In general, surface waters of this region are hard and high in total dissolved solids. Streams may contain elevated levels of sulfates, bicarbonates, calcium, magnesium, and sodium, depending on local conditions.

Project Setting

Urban stormwater runoff discharging into the ocean may locally impair coastal water quality. Because Monterey Bay is designated as a national marine sanctuary, resource protection is assigned a higher priority than research, education programs, and visitor use. The existing Gigling Road has curbs, gutters, catch basins and storm water systems; however, the existing South Boundary Road does not have any stormwater collection systems.

**Regulatory Framework**

Federal

*Clean Water Act*

Water quality objectives for all waters in the State are established under applicable provisions of Section 303 of the Federal Clean Water Act (CWA) and the State Porter-Cologne Water Quality Control Act. The State Water Resources Control Board (SWRCB) and the Central Coast Regional Water Quality Control Board (CCRWQCB) are responsible for assuring implementation and compliance with the provisions of the CWA and the Porter-Cologne Water Quality Act.

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. Section 304(a) requires the Environmental Protection Agency (EPA) to publish water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in the water.

*National Pollutant Discharge Elimination System*

Pursuant to the 1987 Amendments to the Clean Water Act and 1991 regulations promulgated by the Environmental Protection Agency, the SWRCB has adopted the National Pollutant Discharge Elimination System (NPDES) with three general permits for storm water dischargers. One permit applies to industrial dischargers, another permit relates to construction activities, and the third permit is a general permit for municipalities.

NPDES was established by the federal Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the United States. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Section 401 and 402 of the CWA contain general requirements regarding

NPDES permits. Section 307 of the CWA describes the factors that EPA must consider in setting effluent limits for priority pollutants.

The purpose of the NPDES program is to establish a comprehensive storm water quality program to manage urban storm water and minimize pollution of the environment to the maximum extent practicable. The NPDES program consists of: 1) characterizing receiving water quality, 2) identifying harmful constituents, 3) targeting potential sources of pollutants, and 4) implementing a Comprehensive Stormwater Management Program (CSWMP).

Regional

*NPDES Construction Permit*

Central Coast Regional Water Quality Control Board (CCWQCB) is the local agency of SWRCB and is responsible for the issuance of National Pollutant Discharge Elimination System (NPDES) permits under the federal CWA and on behalf of the SWRCB and the EPA for activities that could cause water quality impacts to surface waters and groundwater, including construction activities.

An NPDES construction permit is required when grading and construction disturbs more than an acre during grading activities. The NPDES construction permit requires that the following general measures be implemented during construction activity:

- Eliminate or reduce non-storm water discharges to storm water systems and other waters of the U.S.;
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP); and
- Perform inspections of storm water control structures and pollution prevention measures.

Local

*Fort Ord Reuse Plan*

The entire project area is located within the boundaries of the former Fort Ord. The Conservation Element of the *BRP* contains several policies related to geology and soils within the City of Seaside. The following *BRP* policies would be applicable to the Gigling Road improvements:

> **BRP Hydrology and Water Quality Policy A-1 (City of Seaside):** At the project approval stage, the City shall require new development to demonstrate that all measures will be taken to ensure that runoff is minimized and infiltration maximized in groundwater recharge areas.
>
> **BRP Hydrology and Water Quality Program A-1.1 (City of Seaside):** The City shall develop and make available a description of feasible and effective best management

practices and site drainage designs that shall be implemented in new development to ensure adequate stormwater infiltration.

**BRP Hydrology and Water Quality Program C-1.1 (City of Seaside):** The City shall comply with the nonpoint pollution control plan developed by the California Coastal Commission and the State Water Resources Control Board (SWRCB), pursuant to Section 6217 of the Federal Coastal Zone Management Act Reauthorization Amendments of 1990, if any stormwater is discharged into the ocean.

**BRP Hydrology and Water Quality Program C-1.2 (City of Seaside):** The City shall comply with the General Industrial Storm Water Permit adopted by the SWRCB in November 1991 that requires all storm drain outfalls classified as industrial to apply for a permit for discharge.

**BRP Hydrology and Water Quality Program C-1.3 (City of Seaside):** The City shall comply with the management plan to protect Monterey Bay's resources in compliance with the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, and it's implementing regulations.

**BRP Hydrology and Water Quality Program C-1.5 (City of Seaside):** The City shall support the County in the implementing of a hazardous substance control ordinance that requires that hazardous substance control plans be prepared and implemented for construction activities involving the handling, storing, transport, or disposal of hazardous waste materials.

**BRP Hydrology and Water Quality Policy C-2 (City of Seaside):** At the project approval stage, the City shall require new development to demonstrate that all measures will be taken to ensure that on-site drainage systems are designed to capture and filter out urban pollution.

**BRP Hydrology and Water Quality Program C-2.1 (City of Seaside):** The City shall develop and make available a description of feasible and effective measures and site drainage designs that will be implemented in new development to minimize water quality impacts.

**BRP Hydrology and Water Quality Policy C-4 (City of Seaside):** The City shall prevent siltation of waterways, to the extent feasible.

*City of Seaside*

The entire Gigling Road improvement area is located within the boundaries of the City of Seaside; therefore, the following General Plan policies would be applicable to those improvements.

**General Plan Policy LU-5.4:** Promote the use of recycled water for irrigation of parks, golf courses, and public landscaped areas in the community.

**General Plan Policy COS-2.2:** Encourage the production, distribution, and use of recycled water.

*City of Del Rey Oaks*

The western portion (approximately 6,433 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Del Rey Oaks. Therefore, the following General Plan policies and ordinances are applicable to those improvements.

**General Plan Policy C/OS-11:** The City shall work with the appropriate Water Management District to encourage water conservation, retrofitting, education, reclamation, and reuse.

**General Plan Policy C/OS-12:** Water usage and conservation of water will be considered as part of all land use decisions.

## Land Use and Planning

### Environmental Setting

South Boundary Road

The project area is located on the former Fort Ord portion of the cities of Del Rey Oaks and Monterey and within the Sphere of Influence for the City of Seaside. The South Boundary improvements are included in various regional land use plans including: FORA's CIP and Fee Reallocation Study, TAMC's RTP, and the General Plans for the cities of Del Rey Oaks and Monterey.

South Boundary Road serves as an east-west roadway along the southern boundary of the former Fort Ord and currently provides an alternate access route to and from Ryan Ranch Business Park and Mazda Raceway at Laguna Seca and will provide future access to the proposed Resort at Del Rey Oaks. South Boundary Road begins north of State Route 218 at General Jim Moore Boulevard, parallels the southern edge of the former Fort Ord, along the city limits of the cities of Del Rey Oaks and Monterey, and eventually terminates at the Mazda Raceway at Laguna Seca. South Boundary Road would intersect with the following roadways: General Jim Moore Boulevard (new intersection); the future Southwest (Community Center) and Southeast access roads that would provide access to the Resort at Del Rey Oaks' affordable units and office space area; the future Resort Loop Road West, that would provide access to the Resort at Del Rey Oaks' 250-room hotel, golf clubhouse, and housing; and Rancho Saucito Lane, which provides access to and from Ryan Ranch Business Park.

Gigling Road

Gigling Road is located in the City of Seaside, with the eastern end of the roadway improvement plan lines stopping just before 7th Avenue. According to Figure 3.10-1 of the *BRP*, this area is located in the City of Seaside's University Planning Area. According to the *Seaside General Plan*, the Gigling Road improvement area is located within the *Gigling Road Specific Plan Area*.

Gigling Road is a secondary road accessing future development in the former Fort Ord. Gigling Road begins near State Route 1 at Noumea Road and continues eastward to 8th Avenue where the roadway become Watkins Gate Road. Within the Gigling Road improvement area, Gigling Road intersects with General Jim Moore Boulevard, which is a major north-south route on the former Fort Ord; Malmedy Road, which becomes Lightfighter Drive to the northwest and provides access to existing military housing to the south; Nijmengen Road, which provides access to existing military housing; Parker Flats Road; 6th Avenue and 7th Avenue.

Existing and Surrounding Land Uses

The project area is located on the former Fort Ord Army base and is subject to the *BRP*. However, the South Boundary improvement area is also located within an area that has been transferred to the cities of Del Rey Oaks and Monterey; therefore, is subject to the land use policies within the *City of Del Rey Oaks General Plan* and the *City of Monterey General Plan*. The Gigling Road improvement area was transferred to the City of Seaside; therefore, this improvement area is subject to land use policies within the *City of Seaside's General Plan*.

*South Boundary Road Improvement Area*

According to the *BRP*, the South Boundary Road improvement area is bounded by the following surrounding land uses: 'Visitor Serving' and 'Business Park/Light Industrial Office/R&D' along the northeastern side of the roadway; and 'Visitor Serving,' 'Business Park/Light Industrial Office/R&D,' 'Public Facility/Institutional,' and 'Open Space/Recreation' along the southern side of the roadway. According to the *City of Del Rey Oaks General Plan*, the northern side South Boundary Road improvements area is surrounded by land that is designated for 'Neighborhood Commercial,' 'General Commercial – Visitor,' and 'Office – Professional' land uses and 'Public/Quasi-Public,' 'General Commercial – Visitor,' and 'Office – Professional' land uses along the southern side of the roadway. Within the area designated for 'General Commercial – Visitor' land uses, the Resort at Del Rey Oaks is proposed. The proposed Resort at Del Rey Oaks consists of the following: two hotels (104-room and 250-room); an 18-hole golf course with clubhouse, driving range and golf and tennis learning center; 20 single family homes and a licensed 175-room residential care facility for seniors; 138 affordable housing units; 36 patio homes; 50 small golf villas; 71 town homes; 376 condominiums; and a retail center (Dahlin Group 2007). According to the *City of Monterey General Plan*, the land adjacent to the southern side of the South Boundary Road improvement area is designated for 'Industrial' and 'Parks, Recreation and Open Space' land uses and 'Industrial' along the

northern side of the roadway near Rancho Saucito Lane and east of the proposed Resort at Del Rey Oaks. The land uses surrounding the South Boundary Road improvement area are shown in **Figure 4-7a.**

*Gigling Road Improvement Area*

According to the *BRP*, the Gigling Road improvement area is bounded by the following land uses: 'Military Enclave' along the southern side of the roadway between General Jim Moore Boulevard and Parker Flats Road; 'Public Facility/Institutional' and 'Open Space/Recreation' along the southern side of the roadway between Parker Flats Road and 7th Avenue; 'Neighborhood Retail' along the northern side of the roadway near General Jim Moore Boulevard; and 'Planned Development Mixed Use District' along the northern side of the remaining portion of the roadway. According to the *City of Seaside General Plan*, the Gigling Road improvement area is bounded by the following surrounding land uses: 'Mixed Use' with a 'Specific Plan' overlay along the northern side of the roadway. Land uses considered to be appropriate and desirable for this area include high density rental and ownership units, and community serving retail and services such as bookstores, copy shops, and cafes. Along the southern side of the roadway, the Gigling Road improvement area is surrounded by land that is designated for 'Military,' 'Public/Institutional,' and 'High Density Residential' land uses. The land uses surrounding the Gigling Road improvement area are shown in **Figure 4-7b**.

**Regulatory Framework**

Local

*Fort Ord Reuse Plan*

The entire project area is located within the boundaries of the former Fort Ord. The following *BRP* policies are applicable to the Gigling Road improvements:

> **BRP Residential Land Use Policy E-1 (City of Seaside):** The City of Seaside shall make land use decisions that support transportation alternatives to the automobile and encourage mixed-use projects and the highest-density residential projects along major public transportation routes.
>
> **BRP Residential Land Use Policy E-3 (City of Seaside):** In areas of residential development, the City of Seaside shall provide for designation of access routes, street and road rights-of-way, off-street and on-street parking, bike paths, and pedestrian walkways.
>
> **BRP Residential Program E-3.1 (City of Seaside):** The City of Seaside shall delineate adequate circulation rights-of- way to and within each residential area by creating circulation rights-of-way plan lines.
>
> **BRP Residential Program E-3.2 (City of Seaside):** The City of Seaside shall prepare pedestrian and bikeway plans and link residential areas to commercial development and public transit.

**BRP Commercial Land Use Policy E-1 (City of Seaside):** The City of Seaside shall coordinate the location and intensity of commercial areas at the former Fort Ord with transportation resources and in a manner that offers convenient access.

**BRP Commercial Land Use Program E-1.1 (City of Seaside):** The City of Seaside shall coordinate with FORA and the Transportation Agency of Monterey County to address existing regional transportation needs and to implement the long-range circulation strategy for the former Fort Ord as specified in the Reuse Plan.

**BRP Commercial Land Use Policy E-2 (City of Seaside):** In areas of commercial development, the City of Seaside shall provide for designation of access routes, street and road rights-of-way, off-street and on-street parking, bike paths, and pedestrian walkways.

**BRP Commercial Land Use Program E-2.1 (City of Seaside):** The City of Seaside shall delineate adequate circulation rights-of- way to and within each commercial area by creating circulation rights-of-way plan lines.

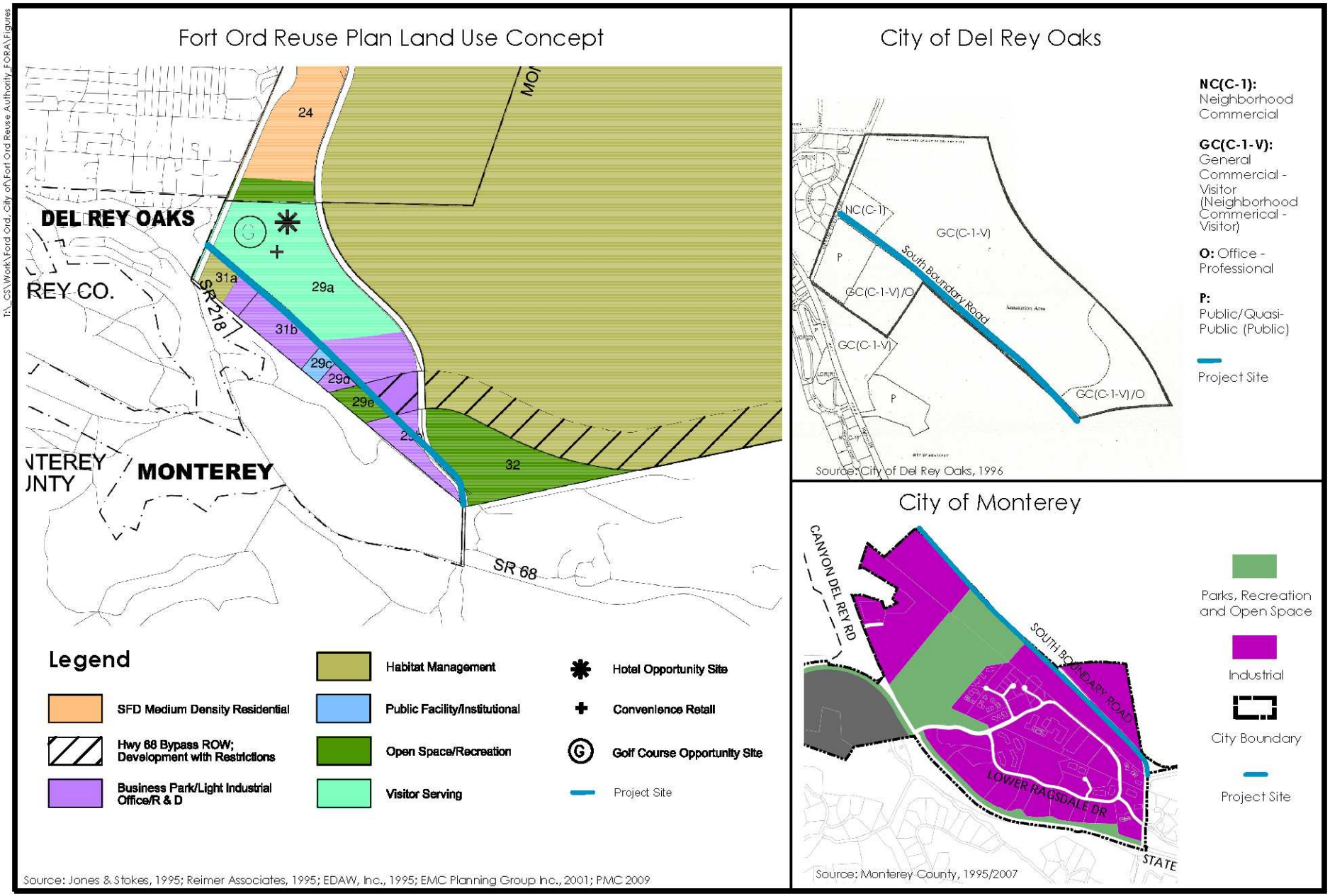
**BRP Commercial Land Use Program E-2.2 (City of Seaside):** The City of Seaside shall prepare pedestrian and bikeway plans and link commercial development to residential areas and public transit.

**BRP Commercial Land Use Program E-2.3 (City of Seaside):** The City of Seaside shall preserve sufficient land at the former Fort Ord for right-of-ways to serve long-range commercial build-out.

*City of Seaside*

The entire Gigling Road improvement area is located within the boundaries of the City of Seaside; therefore, the following General Plan policies and ordinances are applicable those improvements.

**General Plan Policy ED-1.4:** Create a favorable environment in the Gigling Road/Surplus II Area to establish quality urban development compatible with CSUMB's academic environment, provide employment opportunities with high pay and benefits for community residents, new high density rental and ownership housing opportunities, and generate revenue to support City services.




Not to Scale

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**Figure 4-7a**

South Boundary Road Improvement Area Land Use Designations

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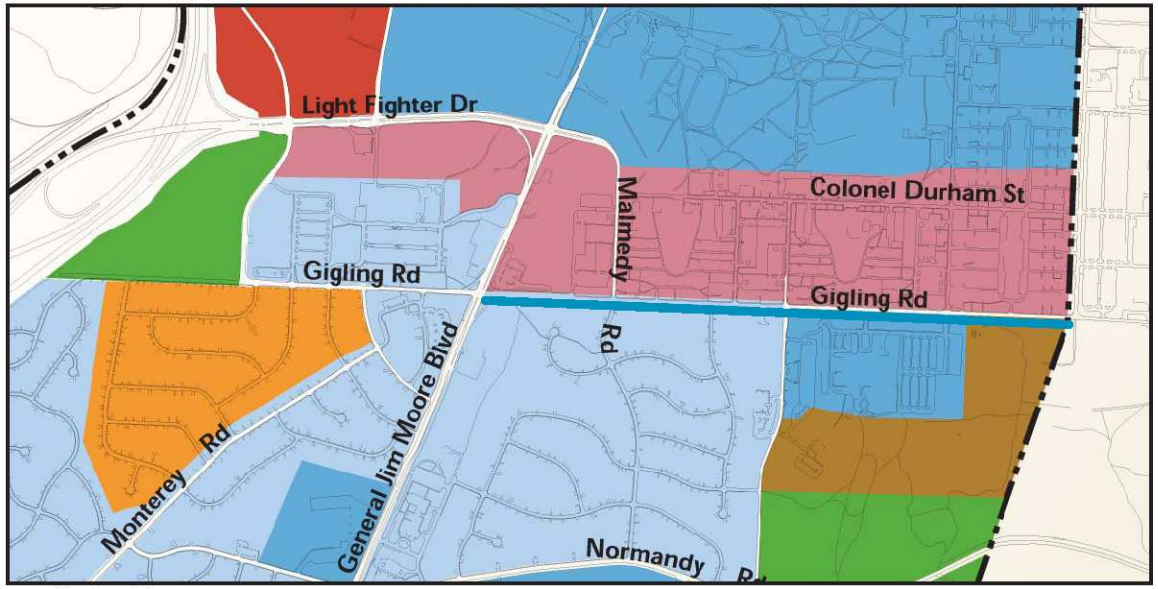
## City of Seaside

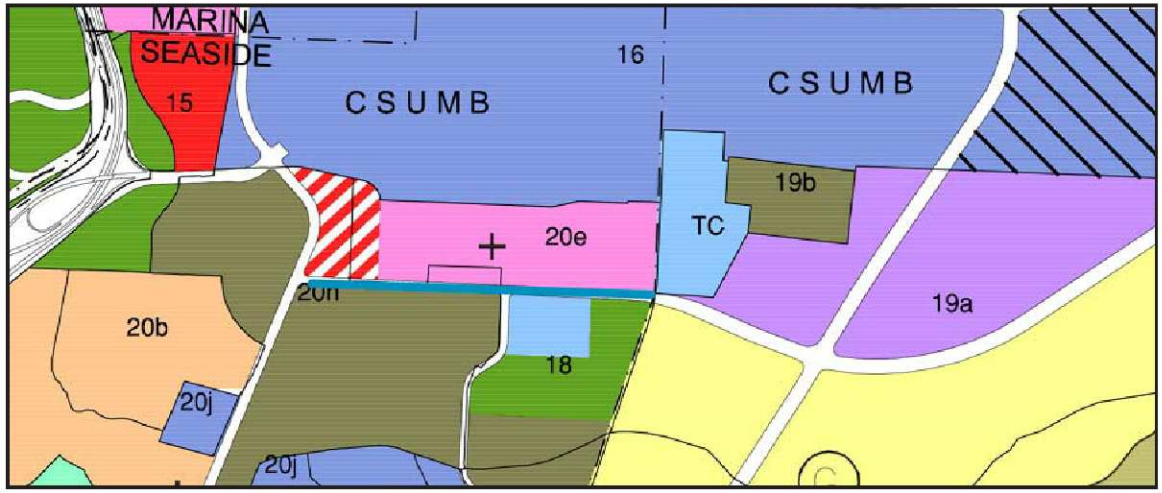



Source: City of Seaside; PMC 2009

**Legend**

- RLS — Low Density Single Family Residential
- RMS — Medium Density Single Family Residential
- RM — Medium Density Residential
- RH — High Density Residential
- CC — Community Commercial
- RCC — Regional Commercial
- HC — Heavy Commercial
- PI — Public/Institutional
- M — Military
- POS — Park and Open Space
- HM — Habitat Management
- RC — Recreational Commercial
- MX — Mixed Use
- Seaside City Bondary
- Project Site

## Fort Ord Reuse Plan Land Use Concept




Source: FORA, Cotton/Bridge/Associates; CAD/GIS 2002; PMC 2009

**Legend**

- SFD Medium Density Residential
- Residential Infill Opportunities
- Planned Development Mixed Use District
- Business Park/Light Industrial Office/R&D
- Neighborhood Retail
- Regional Retail
- Open Space/Recreation
- Habitat Management
- School/University
- Public Facility/Institution
- Military Enclave
- Convenience Retail
- Golf Course Opportunity Site
- Project Site

Not to Scale

N

**Figure 4-7b**

Gigling Road Improvement Area Land Use Designations

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*City of Del Rey Oaks*

The western portion (approximately 6,433 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Del Rey Oaks; therefore, the following General Plan policies would be applicable to those improvements.

> **General Plan Policy L-1:** The City of Del Rey Oaks shall work with adjoining cities, special districts, County, Fort Ord Reuse Authority and regional agencies on matters of zoning, land use planning, transportation planning and watershed management to assure that all development projects and actions are consistent with the goals and policies contained in the City's General Plan, and that such projects and actions shall minimize adverse community and environmental impacts.
>
> **General Plan Policy L-7:** Under grounding of utilities and other forms of enhancement shall be pursued as practicable on public and private property.
>
> **General Plan Policy L-13:** Efforts shall be made to control long-term parking of vehicles on streets, and boats, trailers and recreation vehicles on property where they detract from the orderly appearance of the neighborhood.

*City of Monterey*

The eastern portion (approximately 1,160 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Monterey; therefore, the following General Plan policies would be applicable to those improvements.

> **General Plan Land Use – Land Use Alternatives Policy b.1:** Create design concepts, development guidelines, and capital improvement programs for mixed use neighborhoods. Emphasize attractive pedestrian, bicycle and transit access, which may require improved sidewalks, crosswalks, and various public way improvements. The City encourages owner occupied units, innovative site planning and tailoring the design and density to fit with the neighborhood. Mixed use developments are encouraged to be attractive in design, hide parking from the street, create a pleasant pedestrian environment, and provide a transition into the residential zones through good site planning and design.

## Noise

This section is based on the Noise Impact Analysis prepared by Ambient Air Quality and Noise Consultants for the proposed action/project in August 2009, included as **Appendix G**.

### Acoustical Terminology and Background

Environmental noise is defined as an unwanted sound. Noise is typically measured in decibels (dB), which are logarithmic units of sound energy intensity. Sound waves, traveling outward from a source, exert a sound pressure level (commonly called "sound level") measured in dB. Typical environmental noise levels range from 30 dB (very quiet) to 100 dB (very loud). Conversation is roughly 60 dB at three feet. As background noise

levels exceed 60 dB, speech clarity becomes increasingly difficult. Noise becomes physically discomforting at 110 dB.

The day-night averaged noise level ($L_{dn}$) and the community noise level equivalent (CNEL) are the noise and land use compatibility criteria most widely used in the State of California. These two measurements represent an average of all measured noise levels obtained over a specific period of time. They represent a time-weighted 24-hour average noise level based on A-weighted decibel. Time-weighted refers to the fact that noise that occurs during certain time periods is weighted more heavily. Both the $L_{dn}$ and CNEL scales include a ten dBA adjustment to sounds occurring in the late evening and early morning hours (between 10:00 PM and 7:00 AM). The CNEL scale has an additional five dBA adjustment to sounds occurring in the evening (7:00 PM and 10:00 PM). The $L_{dn}$ and CNEL noise levels are usually within one dBA of each other and are normally considered interchangeable. Noise sensitive receptors are associated with children, elderly, and the chronically or acutely ill. For additional information on acoustic terminology refer to **Appendix G**.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted: the so-called "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged. Regarding increases in A-weighted noise levels, knowledge of the following relationships will be helpful in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans;
- Outside of the laboratory, a 3-dB change is considered a just-perceivable difference;
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected. An increase of 5 dB is typically considered substantial;

- A 10-dB change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

A limitation of using a single noise-level increase value to evaluate noise impacts, as discussed above, is that it fails to account for pre-project noise conditions. With this in mind, the Federal Interagency Committee on Noise (FICON) developed guidance to be used for the assessment of project-generated increases in noise levels that take into account the ambient noise level. The FICON recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (i.e., CNEL, $L_{dn}$). FICON-recommended noise evaluation criteria are summarized in **Table 4-3, FICON Recommended Criteria for Evaluating Increases in Ambient Noise Levels.**

As depicted in **Table 4-3**, an increase in the traffic noise level of 5.0, or greater, would typically be considered to result in increased levels of annoyance where existing ambient noise levels are less than 60 dB. Within areas where the ambient noise level ranges from 60 to 65 dB, increased levels of annoyance would be anticipated at increases of 3 dB, or greater. Increases of 1.5 dB, or greater, could result in increased levels of annoyance in areas where the ambient noise level exceeds 65 dB. The rationale for the FICON-recommended criteria is that as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause significant increases in annoyance. (Ambient 2009)

**Table 4-3**
**FICON Recommended Criteria for Evaluating Increases in Ambient Noise Levels**

| Ambient Noise Level Without Project | Increase Required for Significant Impact |
|---|---|
| < 60 dB | 5.0 dB, or greater |
| 60-65 dB | 3.0 dB, or greater |
| > 65 dB | 1.5 dB, or greater |

Source: Ambient Air Quality and Noise Consultants 2009

## Environmental Setting

### Noise-Sensitive Land Uses

Noise-sensitive land uses generally include those uses where exposure to noise would result in adverse effects, as well as uses where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Other noise-sensitive land uses include hospitals, convalescent facilities, parks, hotels, churches, libraries, and other uses where low interior noise levels are essential. Noise-sensitive land uses located along Gigling Road and South Boundary Road are discussed separately, as follows:

*South Boundary Road Improvement Area*

The nearest noise-sensitive land uses located along South Boundary Road consist of multi-family residential dwellings located approximately 750 feet southwest of South Boundary Road, along Justin Court. The nearest commercial office uses consist of medical office buildings located approximately 300 feet to the south, along Upper Ragsdale Drive. The Community Hospital building is also located along Upper Ragsdale Drive, approximately 800 feet south of South Boundary Road.

*Gigling Road Improvement Area*

The nearest noise-sensitive land uses located along Gigling Road consist of residential housing, the nearest of which is located approximately 100 feet south of the centerline of Gigling Road. Various public and office-related uses are also located within approximately 100 feet of the centerline of Gigling Road.

Ambient Noise Levels

The dominant noise source within the project area is vehicle traffic on area roadways. Existing traffic noise levels (in dBA CNEL) along Gigling Road and South Boundary Road and distance to existing roadway noise contours are summarized in **Table 4-4, Existing Traffic Noise Levels**. As depicted, existing traffic noise levels at approximately 100 feet from the roadway centerline of Gigling Road and South Boundary Road range from approximately 57 to 58 dBA CNEL, respectively.

**Table 4-4**
**Existing Traffic Noise Levels**

| Roadway Segment | Predicted Noise Level (dBA $L_{dn}$/CNEL) | | | |
|---|---|---|---|---|
| | 100 Feet From Roadway Centerline | Distance to Contours (feet) | | |
| | | 55 | 60 | 65 |
| Gigling Road | 56.86 | 132.7 | 61.8 | WR |
| South Boundary Road | 58.65 | 174.6 | 81.3 | WR |

*Notes: Traffic noise levels were predicted using the FHWA traffic noise prediction model. Modeled traffic noise levels and contour distances do not take into account intervening terrain or natural/man-made features. WR = Within Roadway Right-of-way*
Source: Ambient Air Quality and Noise Consultants 2009

Ground-borne Vibration

No major existing sources of ground-borne vibration were identified within the project area. Vehicle traffic on area roadways, particularly heavy-duty trucks, can result in increased groundborne vibration. However, groundborne vibration levels associated with vehicle traffic is typically considered minor and would not exceed applicable criteria at the project site boundaries.

## Regulatory Framework

### Federal

Federal Highway Administration (FHWA) guidelines identify a significant noise increase when exterior traffic noise levels approach or exceed 67 dB $L_{eq}$ for sensitive noise receptors in noise sensitive land uses including: parks, residences, motels, schools, churches, libraries, and hospitals.

### State

*California Department of Transportation*

There are no federal, state, or local regulatory standards for ground-borne vibration. However, various criteria have been established to assist in the evaluation of vibration impacts. For instance, the California Department of Transportation (Caltrans) has developed vibration criteria based on potential structural damage risks and human annoyance. Caltrans-recommended criteria for the evaluation of groundborne vibration levels, with regard to structural damage and human annoyance, are summarized in **Table 4-5** and **Table 4-6**, respectively. The criteria differentiate between transient and continuous/frequent sources. Transient sources of ground-borne vibration include intermittent events, such as blasting; whereas, continuous and frequent events would include vehicle traffic on roadways (Ambient 2009).

**Table 4-5**
**Damage Potential to Buildings at Various Groundborne Vibration Levels**

| Structure and Condition | Vibration Level (in/sec ppv) | |
|---|---|---|
| | Transient Sources | Continuous/Frequent Intermittent Sources |
| Extremely Fragile Historic Buildings, Ruins, Ancient Monuments | 0.12 | 0.08 |
| Fragile Buildings | 0.2 | 0.1 |
| Historic and Some Old Buildings | 0.5 | 0.25 |
| Older Residential Structures | 0.5 | 0.3 |
| New Residential Structures | 1.0 | 0.5 |
| Modern Industrial/Commercial Buildings | 2.0 | 0.5 |

*Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.*

Source: Ambient Air Quality and Noise Consultants 2009

The ground-borne vibration criteria recommended by Caltrans for evaluation of potential structural damage is based on building classifications, which take into account the age and condition of the building. For residential structures and newer buildings, Caltrans considers a minimum peak-particle velocity (ppv) threshold of 0.25 inches per second (in/sec) for transient sources and 0.04 in/sec for continuous/frequent sources to be sufficient to protect against building damage. Continuous ground-borne vibration levels below

approximately 0.02 in/sec ppv are unlikely to cause damage to any structure. In terms of human annoyance, continuous vibrations in excess of 0.04 in/sec ppv and transient sources in excess of 0.25 in/sec ppv are identified by Caltrans as the minimum perceptible level for ground vibration. Short periods of ground vibration in excess of 2.0 in/sec ppv can be expected to result in severe annoyance to people. Short periods of ground vibration in excess of 0.1 in/sec ppv (0.2 in/sec ppv within buildings) can be expected to result in increased levels of annoyance (Ambient 2009).

**Table 4-6**
**Annoyance Potential to People at Various Groundborne Vibration Levels**

| Human Response | Vibration Level (in/sec ppv) | |
|---|---|---|
| | Transient Sources | Continuous/Frequent Intermittent Sources |
| Barely Perceptible | 0.04 | 0.01 |
| Distinctly Perceptible | 0.25 | 0.04 |
| Strongly Perceptible | 0.9 | 0.10 |
| Severe | 2.0 | 0.4 |

*Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.*

Source: Ambient Air Quality and Noise Consultants 2009

Local

Noise is a concern both from the standpoint of noise generated by a project and received elsewhere, and noise received by the project from other sources. The *BRP* and the Cities' of Seaside, Del Rey Oaks and Monterey General Plans establish levels of acceptable exterior noise exposure for the various types of land use. Noise is a concern both from the standpoint of noise generated by a project and received elsewhere, and noise received by the project from other sources.

*Fort Ord Reuse Plan*

The entire project area is located within the boundaries of the former Fort Ord. The *BRP* Noise Element contains several policies related to noise within the City of Seaside. The following *BRP* policies would be applicable to the Gigling Road improvements.

> **BRP Noise Policy B-1 (City of Seaside):** The City shall ensure that the noise environments for existing residences and other existing noise-sensitive uses do not exceed the noise guidelines presented in Tables 4.5-3 and 4.5-4 [Fort Ord Ruse Plan], where feasible and practicable.
>
> **BRP Noise Policy B-2 (City of Seaside):** By complying with the noise guidelines presented in Tables 4.5-3 and 4.5-4 [Fort Ord Ruse Plan], the City shall ensure that new development does not adversely affect existing or proposed uses.

**BRP Noise Policy B-3 (City of Seaside):** The City shall require that acoustical studies be prepared by qualified acoustical engineers for all new development that could result in noise environments above noise range I (normally acceptable environment), as defined in Table 4.5-3 [Fort Ord Ruse Plan]. The studies shall identify the mitigation measures that would be required to comply with the noise guidelines, specified in Tables 4.5-3 and 4.5-4 [Fort Ord Ruse Plan], to ensure that existing or proposed uses will not be adversely affected. The studies should be submitted prior to accepting development applications as complete.

**BRP Noise Policy B-6 (City of Seaside):** If the ambient day-night average sound level (DNL) exceeds the normally acceptable noise range for residential uses (low density single family, duplex, and mobile homes; multi-family; and transient lodging), as identified in Table 4.5-3 [Fort Ord Ruse Plan], new development shall not increase ambient DNL in residential areas by more than 3 dBA measured at the property line. If the ambient DNL is within the normally acceptable noise range for residential uses, new development shall not increase the ambient DNL by more than 5 dBA measured at the property line.

**BRP Noise Policy B-7 (City of Seaside):** If the ambient DNL exceeds the normally acceptable noise range for commercial (office buildings and business, commercial, and professional uses) or industrial (industrial, manufacturing, utilities, and agriculture) uses, as identified in Table 4.5-3 [Fort Ord Ruse Plan], new development in commercial or industrial areas shall not increase the ambient DNL by more than 5 dBA measured at the property line.

**BRP Noise Policy B-8 (City of Seaside):** If the ambient DNL exceeds the normally acceptable noise range for public or institutional uses (passively and actively used open spaces; auditoriums, concert halls, and amphitheaters; schools, libraries, churches, hospitals and nursing homes; golf courses, riding stables, water recreation areas, and cemeteries), as identified in Table 4.5-3 [Fort Ord Ruse Plan], new development shall not increase ambient Ldn by more than 3 dBA measured at the property line.

**BRP Noise Policy B-9 (City of Seaside):** The City shall require construction contractors to employ noise-reducing construction practices.

*City of Seaside*

The entire Gigling Road improvement area is located within the boundaries of the City of Seaside. To ensure that noise producers do not adversely affect sensitive receptors, the *City of Seaside General Plan* provides land use compatibility standards when planning and making development decisions. **Table 4-7, City of Seaside General Plan Interior and Exterior Noise Standards**, summarizes City noise standards for various types of land uses. The standards represent the maximum acceptable noise level used to determine noise impacts. These noise standards are the basis for the development of the land use compatibility guidelines presented in **Table 4-8, City of Seaside General Plan Noise/Land**

**Use Compatibility Matrix**. If the noise level of a project falls within Zone A or Zone B, the project would be considered compatible with the noise environment. Zone A implies that no mitigation would be needed. Zone B implies that minor mitigation measures may be required to meet the City's noise standards. All development project proponents are required to demonstrate that the noise standards would be met prior to approval of projects. If the noise level of a project falls within Zone C, substantial noise mitigation would be necessary to meet the noise standards. Mitigation may involve construction of noise barriers and substantial building sound insulation. Projects in Zone C can be successfully mitigated; however, project proponents must demonstrate that the noise standards would be met prior to issuance of building permits. If noise levels fall outside of Zones A, B, and C, projects would be considered clearly incompatible with the noise environment and should not be approved.

**Table 4-7**
**City of Seaside General Plan Interior and Exterior Noise Standards**

| Land Use | Noise Standards (dBA CNEL) | |
|---|---|---|
| | Exterior | Interior |
| Residential | 65 | 45 |
| Mixed Use Residential | 70 | 45 |
| Commercial | 70 | – |
| Office | 70 | 50 |
| Industrial | 75 | 55 |
| Public Facilities | 70 | 50 |
| Schools | 50 | 50 |

Source: Ambient Air Quality and Noise Consultants 2009

**Table 4-8**
**City of Seaside General Plan Noise/Land Use Compatibility Matrix**

| Land Use Category | Community Noise Equivalent Level (CNEL, dB) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 55 | | 60 | 65 | 70 | 75 | 80 |
| Residential - Single Family, Multifamily, Duplex | A | A | B | B | C | -- | -- |
| Residential - Mobile Homes | A | A | B | C | C | -- | -- |
| Transient Lodging - Motels, Hotels | A | A | B | B | C | C | -- |
| Schools, Libraries, Churches, Hospitals, Nursing Homes | A | A | B | C | C | -- | -- |
| Auditoriums, Concert Halls, Amphitheaters, Meeting Halls | B | B | C | C | -- | -- | -- |
| Sports Arenas, Outdoor Spectator Sports, Amusement Parks | A | A | A | B | B | – | -- |
| Playgrounds, Neighborhood Parks | A | A | A | B | C | -- | -- |
| Golf Courses, Riding Stables, Cemeteries | A | A | A | A | B | C | C |
| Office and Professional Buildings | A | A | A | B | B | C | -- |
| Commercial Retail, Banks, Restaurants, Theaters | A | A | A | A | B | B | C |
| Industrial, Manufacturing, Utilities, Wholesale, Service Stations | A | A | A | A | B | B | B |
| Agriculture | A | A | A | A | A | A | A |

| Land Use Category | Community Noise Equivalent Level (CNEL, dB) | | | | | |
|---|---|---|---|---|---|---|
| | 55 | 60 | 65 | 70 | 75 | 80 |

*Notes: A = Normally Acceptable - Specified land use is satisfactory based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.*
*B = Conditionally Acceptable - New construction or development should be undertaken only after a detailed analysis of the noise requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.*
*C = Normally Unacceptable - New construction or development should generally be discouraged. If it does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.*
*-- = Clearly Unacceptable - New construction or development should generally not be undertaken.*
Source: Ambient Air Quality and Noise Consultants 2009

In addition, the following General Plan policies would be applicable to the Gigling Road Improvements.

> **General Plan Policy UD-2.2:** Minimize potential light and sound impacts of new development and redevelopment on surrounding areas.
>
> **General Plan Policy N-2.1:** Reduce noise impacts associated with motorized vehicles, aircraft, and trains.
>
> **General Plan Policy N-3.1:** Reduce the impacts of noise producing land uses, activities, and businesses on noise-sensitive land uses.

*City of Del Rey Oaks*

The western portion (approximately 6,433 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Del Rey Oaks; therefore, the following General Plan policy would be applicable to those improvements.

> **General Plan Policy N-4:** Noise/land use compatibility shall be considered impacted if exposed to noise levels on the exterior of a building that exceeds 65dB, and on the interior of a building exceeds 45dB.

*City of Monterey*

The eastern portion (approximately 1,160 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Monterey; therefore, the following General Plan policies would be applicable to those improvements.

> **General Plan Noise-Motor Vehicle Noise Policy a.5:** Protect areas adjacent to roadways and freeways with landscaped noise buffers or other means; sound walls should not be allowed.

**General Plan Noise-Motor Vehicle Noise Policy a.6:** Develop and encourage the use of non-automobile travel modes such as bicycle, pedestrian and transit alternatives.

**General Plan Noise-New Development Policy d.1**: The City can require noise mitigations to reduce interior noise levels to an acceptable level. **Table 4-9, City of Monterey General Plan Land use Compatibility Noise Criteria,** establishes the land use compatibility standards for new development.

**General Plan Noise-New Development Policy d.2:** Limit hours of noise generating construction activities. Include this requirement as a condition of project approval.

**Table 4-9**
**City of Monterey General Plan Land Use Compatibility Noise Criteria**

| Land Use Category | Noise Exposure Zones ($L_{dn}$ or CNEL) dBA | | | |
|---|---|---|---|---|
| | I | II | III | IV |
| Residential – low density, Single family, duplex, mobile homes | <60 | 55-70 | 70-75 | >75 |
| Residential – multi-family | <65 | 60-70 | 70-75 | >75 |
| Transient lodging - motels, hotels | <65 | 60-70 | 70-80 | >80 |
| Schools, libraries, churches, hospitals, nursing homes | <70 | 60-70 | 70-80 | >80 |
| Auditoriums, concert halls, amphitheaters | – | -- | <70 | >65 |
| Sports arena, outdoor spectator sports | – | – | <75 | >70 |
| Playgrounds, neighborhood Parks | <70 | 67-75 | >77 | – |
| Golf courses, riding stables, water recreation, cemeteries | <70 | -- | 70-80 | >80 |
| Office buildings, business commercial and professional | <70 | 67-75 | >75 | -- |
| Industrial, manufacturing, utilities, agriculture | <75 | 70-80 | >75 | -- |

| | |
|---|---|
| *Noise Zone I* | *Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.* |
| *Noise Zone II* | *Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction but with closed windows and fresh air supply systems or air conditioning will normally suffice.* |
| *Noise Zone III* | *Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation feature included in the design.* |
| *Noise Zone IV* | *Clearly Unacceptable: New construction or development should generally not be undertaken.* |

Source: Ambient Air Quality and Noise Consultants 2009

## Transportation and Circulation

### Environmental Setting

The existing roadway alignment along South Boundary Road and Gigling Road are two-lane roadways within the project area.

South Boundary Road

South Boundary Road is a two-lane roadway with no curb, gutter or sidewalks. South Boundary Road begins just north of State Route 218 at General Jim Moore Boulevard, which is identified as the major north-south roadway through the southern part of the former Fort Ord. South Boundary Road progresses southeast along the southern boundary of Fort Ord, traveling north of State Route 218 and ending at State Route 68 approximately five linear miles from its intersection with General Jim Moore Boulevard. However, the roadway is gated off just east of Rancho Saucito Lane and is only open to the public during events at the Mazda Raceway at Laguna Seca. There are stop-sign controlled intersections at General Jim Moore Boulevard and Rancho Saucito Lane.

Gigling Road

Gigling Road is a two-lane roadway that has curbs gutters, and sidewalks on both sides of most the street. Gigling Road as an east-west facility in the central part of the former Fort Ord aligned south of Lightfigher Drive. It connects with several north-south streets, including General Jim Moore Boulevard, which provides access to Lightfigher Drive and the Main Gate. Gigling Road serves the Parker Flats area of former Fort Ord. The intersection of Gigling Road/General Jim Moore Boulevard is signal controlled. The Gigling Road/6th Avenue intersection is stop sign controlled in all directions.

Transit

Monterey-Salinas Transit (MST) provides local bus service for the Monterey Peninsula. The service area includes the former Fort Ord as well as Seaside, Monterey, Del Rey Oaks, Marina and other Peninsula cities. Service originates from two primary locations: the Monterey Transit Plaza in central Monterey, and the Salinas Transit Center in downtown Salinas. There is connecting service between Monterey and Salinas via the former Fort Ord, as well as a Monterey-Marina line (#16) that serves the former Fort Ord.

Lines #12 and #16 make stops at the Gigling Road/General Jim Moore Boulevard intersection, where the Gigling Road improvements begin. Line #16 then travels north, while Line #12 travels along Gigling Road, making a stop in front of the Department of Defense complex between Parker Flats Road and 6th Avenue.

Currently, South Boundary Road is not served by the MST transit system; however, line #6 travels along General Jim Moore Boulevard and serves the Ryan Ranch Business Park, which connects to South Boundary Road at Rancho Saucito Lane.

## Regulatory Framework

Local

*Fort Ord Reuse Plan*

The entire project area is located within the boundaries of the former Fort Ord. The *BRP* Circulation Element contains several policies related to transportation and circulation. The following *BRP* policies would be applicable to the proposed action/project.

**BRP Streets and Roads Policy A-1:** FORA and each jurisdiction with lands at former Fort Ord shall coordinate with and assist TAMC in providing funding for an efficient regional transportation network to access former Fort Ord and implement FORA's Development and Resource Management Plan (DRMP).

**BRP Streets and Roads Policy B-1:** FORA and each jurisdiction with lands at former Fort Ord shall design all major arterials within former Fort Ord to have direct connections to the regional network (or to another major arterial that has a direct connection to the regional network) consistent with the Reuse Plan circulation framework.

**BRP Streets and Roads Program B-1.1:** Each jurisdiction shall coordinate with FORA to design and provide an efficient system of arterials consistent with Figures 4.2-2 (in the 2015 scenario) and Figure 4.2-3 (in the buildout scenario) in order to connect to the regional transportation network.

**BRP Streets and Roads Policy C-1:** Each jurisdiction shall identify the functional purpose of all roadways and design the street system in conformance with Reuse Plan design standards.

**BRP Streets and Roads Program C-1.2:** Each jurisdiction shall preserve sufficient right-of-way for anticipated future travel demands based on buildout of the FORA Reuse Plan.

**BRP Transit Policy A-1:** Each jurisdiction with lands at former Fort Ord shall coordinate with MST to provide regional bus service and facilities to serve the key activity centers and key corridors within former Fort Ord.

**BRP Transit Program A-1.2:** Each jurisdiction shall develop a program to identify locations for bus facilities, including shelters and turnouts. These facilities shall be funded and constructed through new development and/or other programs in order to support convenient and comprehensive bus service.

**BRP Pedestrian and Bicycles Policy A-1:** Each jurisdiction shall provide and maintain an attractive and comprehensive pedestrian system.

**BRP Pedestrian and Bicycles Program A-1.1:** Each land use jurisdiction shall prepare a Pedestrian System Plan that includes the construction of sidewalks along both sides of urban roadways, sidewalks and pedestrian walkways in all new developments and public facilities, crosswalks at all signalized intersections and other major intersections, where warranted, and school safety features. This plan shall be coordinated with adjacent land use jurisdictions, FORA, and appropriate school entities.

**BRP Pedestrian and Bicycles Policy B-1:** Each jurisdiction shall provide and maintain an attractive, safe and comprehensive bicycle system.

**BRP Pedestrian and Bicycles Program B-1.1:** Each jurisdiction shall prepare a Bicycle System Plan that includes an overall bicycle network consistent with the Reuse Plan (Figure 4.2-6) and local bicycle networks with the appropriate class of bikeways for each functional class of roadway. The Bicycle System Plan shall include appropriate design standards to accommodate bicycle travel and secure bicycle parking facilities at public and private activity centers. This plan shall be coordinated with adjacent land use jurisdictions, FORA, and appropriate school entities.

**BRP Pedestrian and Bicycles Program B-1.2:** Each jurisdiction shall review new development to provide bicycle system facilities consistent with the Reuse Plan and the Bicycle System Plan concurrently with development approval.

**BRP Land Use and Transportation Policy A.2:** The transportation system to serve former Fort Ord lands shall be designed to reflect the needs of surrounding land uses, proposed densities of development, and shall include streets, pedestrian access, bikeways, and landscaping as appropriate.

*City of Seaside*

The entire Gigling Road improvement area is located within the boundaries of the City of Seaside. Therefore, the following General Plan policies would be applicable to the Gigling Road improvements.

**General Plan Policy C-1.3:** Coordinate improvements to and maintenance of the City circulation system with other major transportation and infrastructure improvement programs.

**General Plan Policy C-2.1:** Coordinate planning, construction and maintenance of development projects and circulation improvements with adjacent jurisdictions and transportation agencies.

**General Plan Policy C-3.1:** Support the provision and expansion of regional transit services and support facilities to serve the City.

**General Plan Policy C-3.4:** Support alternative modes of transportation that encourage physical activity, such as biking and walking.

**General Plan Policy COS-1.3:** Maximize pedestrian, transit, and bicycle access to parks and other local and regional activity centers as an alternative to automobile access.

*City of Del Rey Oaks*

The western portion (approximately 6,433 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Del Rey Oaks; therefore, the following General Plan policies would be applicable to those improvements.

**General Plan Policy C-1:** Level of Service (LOS) shall be defined as by the most recent planning method in the Highway Capacity Manual (HCM) for intersections during the weekday afternoon peak hour.

**General Plan Policy C-8:** Minimize the potential negative impact of the reopening of North-South Road.

**General Plan Policy C-11:** In order to provide or promote a safe, interconnected network of bicycle and pedestrian routes linking homes with places of work, school, recreation, shopping, transit centers, and other activity centers both within the City and nearby, four Class II City Bike Routes are herby designated and adopted:

- Highway 218 within City Limits
- North/South Road from City limit to Highway 218 (requested Fort Ord Annexation area)
- Carlton Drive from highway 218 to the City limit
- South Boundary Road (requested Fort Ord Annexation area)

**General Plan Policy C-12:** Any improvement, repavement or signalization on the three designated City Bike Routes permitted by the City shall include Type II bike lanes on both sides of the affected segment of those routes.

**General Plan Policy C-16:** The City will seek to continue and expand the provision of MST or other transit services to existing and new users.

*City of Monterey*

The eastern portion (approximately 1,160 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Monterey; therefore, the following General Plan policies and programs would be applicable to those improvements.

**General Plan Circulation – Roads Policy c.4:** Create and maintain a roadway system that is safe, unobtrusive, and easy to use for all modes of transportation.

**General Plan Circulation – Roads Program c.4.1:** Consider the needs of buses, bicyclists, and pedestrians when planning road improvements.

**General Plan Circulation – Roads Policy c.5:** Preserve the city's character and valuable resources in future roadway improvements to the transportation system.

**General Plan Circulation – Roads Program c.5.1:** Respect the character and type of surrounding land uses through the design and use of streets.

**General Plan Circulation – Roads Program c.5.2:** Preserve natural and historic resources and maintain scenic views when siting and developing new roads.

**General Plan Circulation – Roads Program c.5.3:** Incorporate appropriate landscaped medians, parkways, signs, utilities, street furniture, sidewalks, and bicycle lanes into transportation projects.

**General Plan Circulation – Roads Program c.5.4:** Maintain the major entrances to the city as scenic, landscaped corridors.

**General Plan Circulation – Roads Program c.13.2:** Support Monterey-Salinas Highway 68 widening to four lanes of expressway or a new off alignment bypass facility.

**General Plan Circulation – Roads Policy c.15:** Continue to coordinate with Caltrans and TAMC to identify improvements and funding for improvements to Highway 1, Highway 68 and other locations within the City deemed important to the function of the regional transportation network so that the level of service standards for such facilities are met.

**General Plan Circulation – Bicycle & Pedestrian Circulation Policy d.5:** Design intersections to improve pedestrian safety, minimize pedestrian crossing distances, and reduce signal time needed to serve non-vehicle movements.

**General Plan Circulation – Bicycle & Pedestrian Circulation Program d.5.1:** Install curb extensions to minimize the time needed for pedestrians to cross busy streets.

**General Plan Circulation – Bicycle & Pedestrian Circulation Program d.5.2:** Provide sidewalk curb ramps in all major activity areas and commercial centers in accordance with the Americans with Disabilities Act.

**General Plan Circulation – Bicycle & Pedestrian Circulation Policy d.8:** Maintain designated bicycle routes as attractive and safe transportation facilities that provide a viable alternative to auto travel into and throughout the city.

**General Plan Circulation – Bicycle & Pedestrian Circulation Policy f.6:** Work with MST and area jurisdictions to improve transit links between residential areas and areas of major city employment.

**General Plan Circulation – Bicycle & Pedestrian Circulation Policy h.1:** Provide an exceptional local shuttle, scenic bicycle routes, and attractive pedestrian paths.

## Utilities and Service Systems

### Environmental Setting

The existing alignment of Gigling Road contains 6-, 8-, 10- and 12-inch gas lines, stormwater catch basins, 4kV and 12kV underground and overhead power lines, and 28 power poles (to be relocated by others) as shown on project plans included in **Appendix B**.

The existing alignment of South Boundary Road does not contain any power, gas, sanitary sewer, or water lines. However, existing runoff from the south side of the South Boundary Road right-of-way feeds a small existing drainage swale, which parallels South Boundary Road and ultimately runs through the Park District Parcel to the low-lying pond referred to as the "Frog Pond." This alignment and flow in the existing drainage swale will not be affected by the proposed action/project. As the existing drainage swale flows west, it will remain an independent system.

### Regulatory Framework

Local

*Fort Ord Reuse Plan*

The entire project area is located within the boundaries of the former Fort Ord; therefore, the following policies would be applicable to the Gigling Road improvements.

**BRP Recreation Policy B-2 (City of Seaside).** The City shall establish landscape gateways into the former Fort Ord along major transportation corridors with the intent of establishing regional landscape character.

**BRP Recreation Policy G-3 (City of Seaside).** The City/County shall adopt landscaping standards to guide development of streetscapes, parking lots, government facilities, industrial grounds, and other public and semi-public settings within the former Fort Ord.

*City of Seaside*

The entire Gigling Road improvement area is located within the boundaries of the City of Seaside; therefore, the following General Plan policies would be applicable to those improvements.

**General Plan Policy LU-6.2:** Ensure new development and redevelopment projects provide adequate sewage collection infrastructure.

**General Plan Policy LU-8.2:** Ensure that developers provide stormwater retention/detention facilities and institute Best Management Practices that regulate runoff and siltation that meets local, State, and federal standards.

*City of Del Rey Oaks*

The western portion (approximately 6,433 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Del Rey Oaks; therefore, the following General Plan policies would be applicable to those improvements.

**General Plan Policy S-3:** All new development shall connect to a municipal water and sewer system.

**General Plan Policy S-6a:** The direct discharge of storm water or other drainage from new impervious surfaces created by development of the office park (OP) parcel into the ephemeral drainage in the natural area expansion (NAF) parcel will be prohibited. No increase in the rate of flow of storm water runoff beyond pre-development quantities shall be managed on site using basins, percolation wells, pits, infiltration galleries, or any other technical or engineering methods that are appropriate to accomplish these requirements. Indirect, sub-surface discharge is acceptable. These storm water management requirements would be utilized for development on polygon 31b.

*City of Monterey*

The eastern portion (approximately 1,160 linear feet) of the South Boundary Road improvement area is located within the boundaries of the City of Monterey; therefore, the following General Plan policies would be applicable to those improvements.

**General Plan Public Facilities - Storm Drain Policy l.2:** The City of Monterey will comply with requirements from State regulatory agencies related to urban runoff quality. This includes required implementation of the National Pollution Discharge Elimination System (NPDES) Phase II six minimum measures.

**General Plan Public Facilities – Water Policy m.1:** Develop alternatives for long-term water supply both within and outside the framework of the Water Management District and the California American Water Company.

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# Chapter 5

# Environmental Consequences of the Proposed Action/Project

# CHAPTER 5: ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

## Introduction

This chapter addressed the environmental consequences associated with the proposed action/project and addresses the following topics:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation and Circulation
- Utilities and Service Systems

Mitigation measures are identified for any potentially significant impacts resulting from the proposed action/project. It should be noted that this action/project is required mitigation as described in the *Fort Ord Reuse Plan (BRP)-CIP*.

## Aesthetics

**Standards of Significance:** For purposes of this analysis, the proposed action/project would result in a significant impact if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including but not limited to, trees, rocks outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; and/or
- Create a new source of substantial light or glare.

### Scenic Vista and Scenic Resources

The project area is not located in the vicinity of a state scenic highway and there are no scenic vistas identified in the *BRP* or the General Plans for the cities of Seaside, Del Rey Oaks and Monterey that would be affected by the proposed action/project. Although the project area is visible from select areas of the Monterey Peninsula and the proposed roadway improvements will result in a more significant visual presence in the short-term; when viewed from the context of the roadway's relationship to future development, the proposed action/project would not have a significant visual impact. The proposed action/project would have **no impact** on identified scenic vistas or scenic resources within a state scenic highway.

### Visual Character

The proposed action/project would include grading activities that would alter the existing topography where cut and fill slopes are required, and would result in the removal of existing trees, shrubs, and other vegetation. The proposed action/project would result in the removal of vegetation and trees within the limits of construction. Removal of vegetation and trees within the project area would result in alteration of the visual character within the immediate vicinity of the project area.

The proposed action/project will include the hydroseeding of all exposed surfaces, which would result in relatively rapid revegetation of the exposed graded areas and would include implementation of an irrigation plan and landscaping plan consistent with the *BRP* Recreation Policies B-2 and G-3. In addition, mitigation measures incorporated herein would require FORA to prepare a tree removal and replacement plan that would include salvaging of existing trees within the grading limits and planting of replacement trees for proposed tree removals. With implementation of these components of the proposed action/project, a **less than significant** impact would occur to the visual character of the project area.

### Light and Glare

The proposed action/project does not include the installation of traffic signals; however, traffic signals may be installed at the South Boundary Road/General Jim Moore Boulevard intersection as signal warrants are met. Street lighting is proposed for installation along the entire length of Gigling Road and South Boundary Road. Street lighting has the potential to emit light and glare. Lighting associated with the proposed action/project would be a combination of double arm electroliers in the median (along Gigling Road only), and alternating signal arm poles located behind the curb line. The proposed lighting sources along the proposed roadway alignment would be visible from adjacent land uses and would emit additional light and glare within the project area. This is considered a **potentially significant impact**, requiring compliance with the following mitigation measure.

Mitigation Measure

**MM-1** Prior to final plan approval, FORA shall prepare detailed lighting plans indicating the locations and type of fixtures to be used and demonstrating that exterior lighting maintains acceptable non-intrusive levels. Lighting plans shall also incorporate baffles and lens cut-offs to direct lighting downward and to minimize the unwanted spillover of light. All external lighting shall be noted on final improvement plans prior to implementation of the proposed action/project.

**Timing/Implementation:** Prior to the final plan approval.

**Enforcement/Monitoring:** FORA

Implementation of the above mitigation measure would reduce the affects of light and glare to a **less than significant** level by requiring implementation of a detailed lighting plan with fixtures that directs lighting downward and minimize spillover of exterior lighting.

## Air Quality

**Standards of Significance:** For purposes of this analysis, the proposed action/project would result in a significant impact if it would:

- Conflict with or obstruct implementation of the Monterey Bay Unified Air Pollution Control District's (MBUAPCD's) 2008 Air Quality Management Plan (AQMP);
- Violate any ambient air quality standard, including the MBUAPCD's thresholds for construction impacts or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard (AAQS);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people; and/or
- Result in Greenhouse Gas (GHG) emissions in levels that could have a significant effect on the environment.

### Air Quality Management Plan (AQMP)

According to the Association of Monterey Bay Area Governments (Written Communication from Steph Nelson, Planner, AMBAG dated October 23, 2009), the proposed action/project has been included in the current Metropolitan Transportation Plan (MTP); therefore, the proposed action/project is considered to be consistent with the AQMP. Therefore, the proposed project would have a **less than significant** impact on the AQMP.

### Short-Term Construction Impacts

Construction activities would involve the use of equipment and vehicles that would generate short-term dust emissions and diesel exhaust emission, which may expose nearby sensitive receptors to short-term emission. The nearest sensitive land uses located along South Boundary Road consists of multi-family residential dwellings located approximately 750 feet southwest of South Boundary Road, along Justin Court. The nearest commercial office uses consist of medical office buildings located approximately 300 feet to the south, along Upper Ragsdale Drive. The Community Hospital building is also located along Upper Ragsdale Drive, approximately 800 feet south of South Boundary Road. The nearest sensitive land uses located along Gigling Road consist of residential housing, the nearest of which is located approximately 100 feet south of the centerline of Gigling Road. Various

public and office-related uses are also located within approximately 100 feet of the centerline of Gigling Road.

The MBUAPCD threshold of significance for $PM_{10}$ (particulate matter) emissions is 82 pounds per day or greater. The MBUAPCD suggests that minimal grading activity generates about 10 pounds of $PM_{10}$ per day per acre, while excavation and earthmoving generates about 38 pounds of $PM_{10}$ per day per acre. Therefore, the MBUAPCD's threshold of significance would be exceeded whenever more than 8.1 acres of the site undergoes minimal grading or more than 2.2 acres (10,648 $yds^2$) undergoes excavation or earthmoving. The South Boundary Roadway improvement area is approximately 1.44 miles long, encompasses approximately 19.5 acres, and would result in the export of approximately 2,200 $yd^3$ of soil (21,500 $yds^3$ of cut, 19,300 $yds^3$ of fill). The Gigling Road improvement area is approximately 0.92 miles long, encompasses approximately 15.7 acres, and would result in the import of approximately 11,100 $yd^3$ of soil (19,000 $yds^3$ of cut, 30,100 $yds^3$ of fill). The short-term emission calculations from non-road vehicle construction equipment were calculated using the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) Roadway Construction Emissions model, an air quality-modeling program that is more specific for linear construction projects than URBEMIS and was authorized by the MBUAPCD.

To be conservative, the project was analyzed as being implemented separately and together; however, a lack of funding would likely prohibit both projects to occur at the same time. The following assumptions were entered into the model: start of construction was 2010; project duration was eight months; project area included 19.5 acres for South Boundary Road, 15.7 acres for Gigling Road, which combined totaled 35.2 acres; maximum area disturbed per day was five acres; total import/export of soil was 2,200 $yds^3$ of export for South Boundary Road,11,100 $yds^3$ of import for Gigling Road, which combined totaled approximately 8,900 $yds^3$ of import; predominate soil was sand; water trucks would be used; and an average truck capacity of 20 $yds^3$. All other settings were left as default settings. The results of the modeling are shown in **Table 5-1.**

**Table 5-1**
**Estimated Air Quality Construction Emissions and Thresholds**

| Project Phase | Estimated Emissions (lbs/day) | | | |
|---|---|---|---|---|
| | ROG | $NO_x$ | $CO_2$ | $PM_{10}$ |
| **MBUAPCD Threshold** | **137** | **137** | **None established for GHG** | **82** |
| SOUTH BOUNDARY ROAD | | | | |
| Grubbing/Land Clearing | 5.2 | 37.4 | 3,626.4 | 51.8 |
| Grading/Excavation | 7.6 | 54.0 | 5,754.4 | 52.8 |
| Drainage/Utilities/Sub-Grade | 5.3 | 34.5 | 3,397.2 | 52.0 |
| Paving | 4.5 | 20.8 | 1,965.2 | 1.9 |
| **Max. Emissions** | **7.6** | **54.0** | **5,754.4** | **52.8** |
| *Exceed Threshold?* | *No* | *No* | *N/A* | *No* |
| GIGLING ROAD | | | | |

| Project Phase | Estimated Emissions (lbs/day) | | | |
|---|---|---|---|---|
| | ROG | $NO_x$ | $CO_2$ | $PM_{10}$ |
| **MBUAPCD Threshold** | **137** | **137** | **None established for GHG** | **82** |
| Grubbing/Land Clearing | 4.7 | 36.1 | 3,447.6 | 51.6 |
| Grading/Excavation | 7.4 | 55.3 | 5,896.1 | 52.7 |
| Drainage/Utilities/Sub-Grade | 4.7 | 33.2 | 3,218.3 | 51.8 |
| Paving | 3.9 | 19.4 | 1,786.4 | 1.7 |
| **Max. Emissions** | **7.4** | **55.3** | **5,896.1** | **52.7** |
| *Exceed Threshold?* | *No* | *No* | *N/A* | *No* |
| **SOUTH BOUNDARY & GIGLING ROADS** | | | | |
| Grubbing/Land Clearing | 6.2 | 39.8 | 3,942.9 | 52.0 |
| Grading/Excavation | 10.6 | 71.6 | 7,967.2 | 53.6 |
| Drainage/Utilities/Sub-Grade | 6.3 | 36.9 | 3,713.6 | 52.2 |
| Paving | 5.5 | 23.1 | 2,281.7 | 2.1 |
| **Max. Emissions** | **10.6** | **71.6** | **7,967.2** | **53.6** |
| *Exceed Threshold?* | *No* | *No* | *N/A* | *No* |

*Notes: $PM_{10}$ estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total $PM_{10}$ emissions are the sum of exhaust and fugitive dust emissions.*

Source: SMAQMD, Roadway Construction Emissions Model Version 6.3.1, Nov. 2008

Based on the modeling conducted, the grading/excavation phase of the proposed action/project would generate the most total $PM_{10}$ emissions, which were estimated to be a maximum of 71.6 lbs/day if both improvements were simultaneously constructed, as shown in **Table 5-1**. According to the *MBUAPCD's CEQA Guidelines*, calculating VOC and $NO_x$ emissions for construction activities are not necessary because temporary emissions of these ozone precursors have been accommodated in State- and federally-required air plans. Printouts of the air quality modeling are included in **Appendix C**. As shown in **Table 5-1**, the proposed project would not exceed MBUAPCD's threshold of significance for construction projects. No state or federal air quality standards would be exceeded due to short-term nature of the construction impacts. However, in order to ensure that a dust control plan is implemented, the following mitigation measure has been provided.

Mitigation Measures

**MM-2** FORA shall include a dust control plan in all construction documents for the proposed action/project. If any debris or soil is to be removed from the project area, the debris and soil shall be covered while in transit to avoid safety hazards. In addition, grading shall be limited to 2.2 acres per day during grading/excavation efforts.

a) Limit the hours of operation consistent with related noise restrictions;

b) Utilize gasoline-powered equipment whenever an equipment choice is available;

c) Use PuriNOx emulsified diesel fuel in existing engines;

d) Repower and utilize heavy equipment with current standard diesel technology or CNG/LNG technology; and

e) Demonstrate on construction documents how construction phasing and equipment programming will comply with County policies and BACMs identified by the Air District.

**Timing/Implementation:** Prior to final plan approval.

**Enforcement/Monitoring:** FORA

Implementation of mitigation measure **MM-2** would reduce emissions by limiting the area of disturbance, minimizing the equipment operating at one time, and by implementing best management practices. Implementation of the above mitigation measure would ensure that construction dust impacts and the emission of diesel exhaust within the project area to a **less than significant** level by requiring that grading activities for both improvement areas combined are limited to a maximum of 2.2 acres per day and that FORA implement a dust abatement program and within the project area during short-term construction activities.

**Long-Term Operational Impacts**

The proposed action/project would not generate new traffic or stationary source emissions; therefore, operational impacts associated with the proposed action/project are not anticipated. The proposed action/project would increase capacity of the roadway and allow for alternative forms of transportation to accommodate planned growth, as addressed in the *BRP*. The air quality of planned projects within the former Fort Ord would be addressed in future environmental documents.

Furthermore, according to AMBAG (Written Communication from Steph Nelson, Planner, AMBAG dated October 23, 2009), the proposed action/project has been included in the current Metropolitan Transportation Plan (MTP); therefore, the proposed action/project is considered to be consistent with the AQMP. Consistency with the MBUAPCD's AQMP ensures that the proposed project would conform to the State's Implementation Plan and that actions do not interfere with strategies used to attain the State or Federal Ambient Air Quality Standards (AAQS). The fact that the proposed project/action is consistent with the AQMP and that the emissions generated during construction would not exceed MBUAPCD's thresholds of significance ensures that the proposed project would not result in a cumulatively considerable net increase in any criteria pollutants.

**Greenhouse Gas Emissions**

The following discussion focuses on greenhouse gas (GHG) emissions resulting from the proposed action/project, which contribute to global climate change, and discusses emission reduction measures. It is important to note that there are no standards of significance for GHG emissions.

Operational/Project Generated Emissions

The proposed action/project would only have indirect source GHG emissions associated with vehicles traveling on the roadway. The action/project will not change or intensify land use and development. Since the proposed action/project is a roadway project, there would no stationary source GHG emissions.

Vehicle operations along the proposed roadway improvements would generate carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), perfluorocarbons (PFC), and hydrofluorocarbons (HFC) emissions, which are commonly referred to as GHG emissions. However, as noted above, the proposed action/project would not increase the number of vehicle miles traveled beyond that originally analyzed in the *BRP*. The proposed action/project would accommodate future trips generated as a result of buildout of the *BRP*. Although the *BRP EIR* did not evaluate GHG emissions, future development projects within the former Fort Ord area will be required to analyze their GHG emissions during the environmental review process for those projects. At this time, there is no feasible way to quantify the future GHG emissions to be generated along the project area.

GHG emissions associated with the additional trips generated by future development would be partially, if not completely, offset by the improved roadway/intersection operations that the proposed action/project would provide. Implementation of the South Boundary Road improvements would accommodate public transit service to the area, which is currently not being provided, and provide additional roadway capacity to accommodate increased traffic volumes during events at the Mazda Raceway at Laguna Seca. These improvements would help reduce GHG emissions by providing alternate means of transportation, which could reduce the number of vehicles on the roadways and reduce the number of cars idling while attending an event at Mazda Raceway at Laguna Seca. In addition, these improvements would contribute towards a larger roadway project that would eventually connect to York Road to the east. Connecting South Boundary Road to York Road would ease the demand on State Route 68, which operates at an unacceptable level of service of LOS F. Improving operations along State Route 68 would also reduce GHG emissions in the vicinity of the South Boundary Road improvement area. Because the proposed action/project would not increase vehicle miles traveled, the proposed action/project would not result in an increase in GHG emissions beyond those accommodated in the *BRP*. Implementation of the Gigling Road improvements would increase capacity to accommodate future demand. This would ensure that the roadway operates at acceptable levels, which would help keep GHG emissions at a minimum. Therefore, the operational GHG's emitted as a result of the proposed action/project would be considered a **less than significant impact** and would not conflict with any adopted GHG reducing plan, policy or regulation.

Construction Generated Emissions

During construction of the proposed action/project, GHG emissions would be emitted from the operation of construction equipment and from worker and building supply vendor vehicles. The maximum $CO_2$ emissions generated during each construction phase are

summarized in **Table 5-1**. Implementation of mitigation measure **MM-2** would minimize the amount of area disturbed per day, which would reduce $CO_2$ emissions by approximately 80 lbs/day. Furthermore, minimizing the equipment operating at one time and implementing best management practices would further reduce construction-generated emissions of $CO_2$. Therefore, the construction generated GHG's emitted as a result of the proposed action/project would be considered a **less than significant impact** and would not conflict with any adopted GHG reducing plan, policy or regulation.

### Odors

The proposed action/project is a roadway construction project. No new uses are proposed that would be associated with emitting odors. Therefore, the proposed action/project would have **no impact** associated with odor.

## Biological Resources

**Standards of Significance:** For purposes of this analysis, the proposed action/project would result in a significant impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any special-status species;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans or by CDFG or USFWS;
- Interfere substantially with the movement of any resident or migratory fish or wildlife species;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan;
- Conflict with the "take" provisions in the federal or state endangered species law; and/or
- Result in losses greater than those anticipated in the *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord* (April 1997).

The project area is located within designated "Development" areas in the HMP and BRP. Impacts to sensitive species and habitats within "Development" areas are anticipated and accommodated by the policies of the HMP. Large tracts of habitat have been set aside in the HMP as conservation areas to mitigate for the loss of habitat for the affected species in the "Development" areas on the former Fort Ord. The following discussion of the "Development" designation contained in the HMP is pertinent:

> *Lands designated "Development" have no management restrictions placed upon them as a result of the HMP. The biological resources found on these parcels are not considered essential to the long-term preservation of sensitive species at the*

*former Fort Ord. The Biological Opinion allows for development of these parcels, but also requires identification of sensitive biological resources within these parcels that may be salvaged for use in restoration activities within reserve areas. The HMP does not exempt future landowners for complying with environmental regulations enforced by federal, state and local agencies. This includes compliance with the federal Endangered Species Act (ESA). However, implementation of the HMP will simplify future regulatory compliance by allowing U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) to issue permits and take authorizations easily.*

Key components of the HMP and additional elements required of a Habitat Conservation Plan (HCP) are currently being combined to create one stand alone HCP that will meet the requirements of the CDFG and USFWS. This biological resources impact analysis assumes that the HCP and the Implementation Agreement (IA) that is tiered off the HMP will eventually be signed by all the agencies responsible for its implementation and that in the interim, implementation of the existing HMP, or project specific mitigation, will mitigate significant impacts to species and habitats covered under the HMP. The HCP is pending but not yet approved.

Vegetation removal within the Gigling Road improvement area would remove mostly urban/ruderal vegetation within the designated clearing limits, but not exceeding 150 feet of both sides of the existing Gigling Road alignment, for approximately 4,883 linear feet.

Vegetation removal within the South Boundary Road improvement area would also occur within a 150 foot-wide corridor paralleling the existing South Boundary Road between the proposed new General Jim Moore Boulevard/South Boundary Road intersection and where the new roadway joins the existing roadway, approximately 600 feet east of the proposed intersection. Removal of oak woodland and maritime chaparral vegetation within the designated clearing limits would not exceed 150 feet of both sides of the existing South Boundary Road for approximately 7,050 feet.

**Special-status Plant Species**

According to the BRA, implementation of the proposed action/project would directly impact approximately 0.05 acre of Monterey spineflower, a federally listed species, and an additional 0.05 acres could potentially be indirectly and/or temporarily impacted within the South Boundary Road improvement area. In addition, the maritime chaparral (13.3 acres) within the South Boundary Road improvement area provides suitable habitat for sandmat manzanita, Hickman's onion, and Santa Cruz microseris. Monterey spineflower and diffuse spineflower were observed co-occurring in openings with sandy soils in the chaparral and oak woodland communities. Since both species co-occur and it was phenologically difficult to distinguish the difference between the two species in the field, it was assumed that all sites where one species was present, both species have potential to occur. As the intermixed spineflower species occurred in large clumps, not every individual plant within each clump was sampled for presence of the rare Monterey spineflower in the interest of not destroying the population. In addition, Monterey

spineflower is an annual plant, thus the size and location of the population can fluctuate from year to year. As such, an accurate estimate of Monterey spineflower was not obtained. Impacts at this time are based on the mapped areas of spineflower as depicted in **Figures 4-4a** through **4-4d**.

If special-status plant species are present within the project footprint or temporary construction zone (TCZ), they may be affected by trampling, compaction, or removal, which would be considered a potentially significant impact. However, the project area is located within the HMP designated "Development" area, which was anticipated to have loss of habitat and certain special-status species (including Monterey spineflower and sandmat manzanita). This anticipated loss of habitat and special-status species was mitigated through the preservation and management of over 16,000 of habitat reserves. However, the HMP does not authorize incidental take of any species listed as threatened or endangered under the FESA and entities are responsible for submitting the HMP in combination with additional documentation. As the Fort Ord HCP has not yet been adopted, a project cannot take listed species until the HCP has been adopted and/or a federal take permit has been secured. To ensure no take of federally listed Monterey spineflower, areas identified during the survey conducted by PMC in June/July 2009 (see **Figures 4-4a** through **4-4d)**, should be avoided prior to issuance of a take permit by USFWS and/or CDFG or adoption of the Fort Ord HCP. In addition, Hickman's onion and Santa Cruz microseris are not covered species in the HMP. Any impacts to listed plant species prior to adoption of the Fort Ord HCP or receipt of an incidental take permit would be considered a **potentially significant impact**, requiring compliance with the following mitigation measures.

Mitigation Measures

**MM-3a** Construction activities within the South Boundary Road improvement area shall be restricted or phased as necessary to avoid disturbance of the listed plant populations. Avoidance measures include fencing of the population(s) prior to construction to ensure no ingress of personnel or equipment at a minimum radius of 20 feet around a rare plant population and construction monitoring by a qualified biologist. Avoidance areas shall be identified on project plans. Silt fencing and other Best Management Practices (BMPs) shall be used to ensure that the hydrology surrounding the population is not affected by construction activities. In order to ensure viability, trees or shrubbery surrounding the rare plant populations must not be removed.

There are three mitigation strategies available to FORA at the given time: 1) Delay construction until the HCP is adopted; 2) Phase construction to avoid the take of species until the HCP is adopted; or 3) obtain a 2081 permit for the take of species. Upon adoption of the Fort Ord HCP and/or issuance of a take permit (2081) for listed plant species by the USFWS/CDFG, the project proponent may take the species given the stipulations of the take permit or adopted HCP. If listed plants cannot be avoided, the following mitigation measures shall apply:

All efforts must be made to salvage portions of the habitat or plant populations that will be lost as a result of implementation of the proposed action/project by transplanting the plants that would be adversely affected by the proposed action/project for either re-establishment after construction is complete or for planting in a new area in appropriate habitat. A propagation program must be developed for the salvage and transfer of rare, threatened, or endangered plant populations from the project area before the initiation of construction activities. Permits may be required from the CDFG or USFWS, which will ensure that certified biologists are involved in the propagation and transport of rare, threatened, or endangered plant species. (Note: Propagation methods for the salvaged plant population must be developed on a case-by-case basis and must include the involvement of local conservation easements/ preserves/ open space, where applicable). The propagation and transfer of individual plant species must be performed at the correct time of year and successfully completed before the commencement of the project's construction activities eliminate or disturb the plants and habitats of concern.

This mitigation measure may be superseded by the terms of the adopted HCP or take permit.

**Timing/Implementation:** Prior to the initiation of construction activities for South Boundary Road improvements.

**Enforcement/Monitoring:** FORA.

**MM-3b** FORA shall retain a qualified biologist to perform focused surveys to determine the presence/absence of Hickman's onion and Santa Cruz microseris, CNPS List 1B species not included in the HMP, within and adjacent to (within 20 feet, where appropriate) the South Boundary improvement area (project footprint). These surveys must be conducted in accordance with CDFG approved guidelines for conducting field surveys. Field surveys must be scheduled to coincide with known flowering periods, and/or during periods of phonological development that are necessary to identify the plant species of concern. If no special-status plant species are found, then no further mitigation is necessary.

If these CNPS List 1B species are found within or adjacent to (within 20 feet) the South Boundary Road improvement area during the surveys, these plant species must be avoided to the extent possible. Avoidance measures include fencing of the population(s) before construction to ensure no ingress of personnel or equipment at a minimum radius of 20 feet around a rare plant population and construction monitoring by a qualified biologist. Avoidance areas must be identified on project plans. Implementation of silt fencing and other BMPs must ensure that the hydrology surrounding the population is not

affected by project construction. In addition, trees or shrubbery surrounding the rare plant populations must not be removed to ensure that sunlight/shade that may affect the viability is not changed. If these special-status plants cannot be avoided, the following shall apply:

Before the approval of grading plans or any ground breaking activity within the project area, FORA must submit a mitigation plan concurrently to CDFG and USFWS (if appropriate) for review and comment, and FORA may consult with these entities before approval of the mitigation plan. Mitigation measures for directly affected population(s) must be included in the mitigation plan. Possible mitigation for directly impacted population(s) includes implementation of a program to transplant, salvage, cultivate, or re-establish the species at suitable sites (if feasible). The mitigation ratio for directly impacted plant species must be at a minimum ratio of 2:1 (two plants for every one impacted). However, the actual level of mitigation may vary depending on the sensitivity of the species (its rarity or endangerment status), its prevalence in the area, and the current state of knowledge about overall population trends and threats to its survival. Alternatively, replacement credits may be purchased by FORA at an approved mitigation bank should such credits be available.

**Timing/Implementation:** Prior to the initiation of construction activities for South Boundary Road.

**Enforcement/Monitoring:** FORA / *City of Del Rey Oaks*

Implementation of the above mitigation measures would ensure that special-status plants within the South Boundary improvement area are avoided to the extent possible and that those species not avoided are mitigated in accordance with CDFG and USFWS standards, which would reduce this impact to a **less than significant** level. No mitigation measures are required for the Gigling Road improvement area.

### Impacts to Special-status Wildlife Species

According to the BRA, four special-status wildlife species have the potential to occur within the project area including the following: California tiger salamander (*Ambystoma californiense*), black legless lizard, California horned lizard, and American badger (*Taxidea taxus*). However, no special-status wildlife species were observed within the project area. Implementation of the proposed action/project may result in direct or indirect impacts to these special-status species. The potential impacts to these four special-status species are discussed below.

California Tiger Salamander

The California tiger salamander is a federally listed threatened species, a CDFG species of special concern, and a targeted species under the Fort Ord HMP. Potential upland habitat

for the federally listed California tiger salamander (CTS) has been identified within the South Boundary Road improvement area because it is located within 1.24 miles of a known breeding area. In addition, the USFWS has identified the northwestern portion of the alignment as potential breeding and upland habitat (USFWS 2005). Therefore, the USFWS may assume presence or infer that a significant impact would occur within the South Boundary Road improvement area due to the distance to the nearest known occurrence and suitable habitats (USFWS 2005). According to the FESA, any activity with a federal nexus that may affect a federally listed plant or animal requires consultation (Section 7) with the USFWS.

Road improvements such as South Boundary Road and Gigling Road have been addressed in the 2005 USFWS Biological Opinion titled, *Cleanup and Reuse of Former Fort Ord, Monterey County, California, as it affects California Tiger Salamander and Critical Habitat for Contra Costa Goldfields,* under *Infrastructure Improvements and Pre-development Uses on Development Parcels* and the *Memorandum of Agreement Regarding Endangered Species Act Enforcement of Development Restrictions on the Del Rey Oaks Portions of the Former Fort Ord, California*. However, the federal entities involved with the proposed action/project may elect to confirm with USFWS that the proposed action/project conforms with all provisions of this Biological Opinion prior to proceeding. If the proposed action/project does not comply with the conditions in this Biological Opinion, this would be considered a **potentially significant impact**, requiring compliance with the following mitigation measure.

Mitigation Measures

**MM-4** The proposed action/project shall comply with the conditions in the 2005 USFWS Biological Opinion, *Cleanup and Reuse of Former Fort Ord, Monterey County, California, as it affects California Tiger Salamander and Critical Habitat for Contra Costa Goldfields*, issued to the U.S. Army by the USFWS and the *Memorandum of Agreement Regarding Endangered Species Act Enforcement of Development Restrictions on the Del Rey Oaks Portions of the Former Fort Ord, California*. Only those conditions relevant to the project area would apply.

**Timing/Implementation:** Prior to the initiation of construction for the proposed action/project.

**Enforcement/Monitoring:** FORA

Implementation of the above mitigation measure would reduce impacts to the California Tiger Salamander to a **less than significant** level by ensuring compliance with the Biological Opinion, *Cleanup and Reuse of Former Fort Ord, Monterey County, California, as it affects California Tiger Salamander and Critical Habitat for Contra Costa Goldfields* (USFWS 2005).

Black Legless Lizard

The black legless lizard is designated as a species of special concern by CDFG and is included as a targeted species under the Fort Ord HMP. Implementation of the proposed action/project would result in direct and indirect affects to approximately 13.3 acres maritime chaparral and approximately 5.1 acres of coastal oak woodland, which are habitats that may support black legless lizard species. Construction activities within the footprint of the proposed improvements would result in direct effects and activities within the TCZ would result in indirect effects. Within the South Boundary improvement area, the proposed action/project would directly affect approximately 8.1 acres and indirectly affect approximately 5.2 acres of maritime chaparral habitats; and directly affect approximately 2.3 acres and indirectly affect approximately 1.7 acres of coastal oak woodland habitats. Within the Gigling Road improvement area, the proposed action/project would directly affect approximately 0.8 acres and indirectly affect approximately 0.3 acres of coastal oak woodland. Indirect and direct affects to these habitats may result in indirect affects to black legless lizard species, which are associated with these habitats. Mitigation for the loss of potential habitat for the black legless lizard on the former Fort Ord was been provided through the preservation and management of habitat reserve areas within the boundaries of the former Fort Ord as described in the HMP.

Implementation of the proposed action/project would not result in a reduction in populations of this species below self-sustaining levels within the region. Therefore, the proposed action/project's affect on black legless lizard, a species of special concern and targeted HMP species, would be considered a **less than significant impact**. No mitigation measures are necessary.

California Horned Lizard

The California horned lizard is a species of special concern by CDFG. This species is not a targeted species under the Fort Ord HMP; therefore, there is no mitigation for the loss of potential habitat for this species under the HMP. As stated above, implementation of the proposed action/project would directly affect approximately 8.1 acres and indirectly affect approximately 5.2 acres of maritime chaparral within the South Boundary Road improvement area, which may support California horned lizard. Therefore, construction and operational activities within the South Boundary improvement area may impact habitat and/or result in the take of individuals of California horned lizard, if present. However, implementation of the proposed action/project is not expected to result in a reduction in the populations of this species below self-sustaining levels within the region. Therefore, the proposed action/project's affect on California horned lizard, a species of special concern, would be considered a **less than significant impact**. No mitigation measures are necessary.

American Badger

The American badger is a species of special concern by CDFG. This species is not a targeted species under the Fort Ord HMP; therefore, there is no mitigation for the loss of potential habitat for this species under the HMP. Implementation of the proposed

action/project would directly affect approximately 8.1 acres and indirectly affect approximately 5.2 acres of maritime chaparral habitat, which may support this species. Construction and operational activities proposed within the South Boundary Road improvement area may affect habitat and/or result in the take of individuals of American badger, if present. However, this large mobile species is likely to avoid areas of disturbance. In addition, implementation of the proposed action/project is not expected to result in a reduction in the populations of this species below self-sustaining levels within the region. Therefore, the proposed action/project's affect on American badger, a species of special concern, would be considered a **less than significant impact**. No mitigation measures are necessary.

**Impacts to Avian Species**

According to the BRA, the vegetation in and around the project area provide potential nesting habitat for raptors and migratory birds; however, no bird nests were observed within the project area. There are a total of 5.1 acres of coastal oak woodlands and 13.3 acres of maritime chaparral within the project area. Implementation of the proposed action/project would affect approximately 4.3 acres of coastal oak woodland and approximately 13.3 acres of maritime chaparral. These acreages do not reflect the additional trees and shrubs located within the urban/ruderal habitats where birds may also nest. Implementation of the proposed action/project would result in the removal of habitats that may affect birds protected under the Migratory Bird Treaty Act (MBTA), if present. All native breeding birds (except game birds during the hunting season), regardless of their listing status, are protected under the MBTA. Removal of vegetation during the nesting season would result in direct impacts to nesting birds if present, which would be considered a **potentially significant impact**. Furthermore, noise and other human activity may result in nest abandonment, if nesting birds are present within 100 feet (200 feet for raptors) of construction activities. The following mitigation measure would reduce this impact to a less than significant level.

Mitigation Measures

**MM-5** No more than 30 days prior to ground disturbance or tree removal during the nesting season for local avian species (typically February 22 through August 1), FORA shall retain shall retain a qualified biologist to conduct a focused survey for active nests of special-status birds within and in the vicinity of the project area (up to 200 feet and no less than 100-feet outside project boundaries, where possible). If active nests are found, trees/shrubs with nesting birds shall not be disturbed until abandoned by the birds or a qualified biologist deems disturbance potential to be minimal (in consultation with USFWS and/or CDFG, where appropriate). If applicable, tree removal shall be restricted to a period following fledging of chicks, which typically occurs between late July and early August. If active nests are located within the 100 feet (200 feet for raptors) of proposed construction activities, other restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 100 feet or 200

feet, as appropriate, around the nest as confirmed by the appropriate resource agency) or alteration of the construction schedule. Reference to this requirement and the MBTA shall be included in the construction specifications.

If construction activities or tree removal are proposed to occur during the non-breeding season (August 2 – February 21), a survey is not required, no further studies are necessary, and no mitigation is required.

This mitigation measure may be superseded by the terms of the adopted HCP or take permit.

**Timing/Implementation:** Prior to the initiation of construction for the proposed action/project.

**Enforcement/Monitoring:** FORA.

Implementation of the above mitigation measure would reduce impacts to nesting raptors and migratory birds to a **less than significant** level.

**Impacts to Sensitive Natural Communities**

Implementation of the proposed action/project would result in the direct loss of approximately 8.1 acres of maritime chaparral at the South Boundary Road improvement area, 2.3 acres of coastal oak woodland at the South Boundary Road improvement area and 0.8 acre of coastal oak woodland at the Gigling Road improvement area. In addition, indirect and/or temporary impacts may result in the 20-foot TCZ surrounding each proposed roadway alignment. This would result in the indirect/temporary impact of approximately 5.2 acres of maritime chaparral at the South Boundary Road improvement area, 1.7 acres of coastal oak woodland at the South Boundary Road improvement area, and 0.3 acre of coastal oak woodland at the Gigling Road improvement area. The sensitive natural communities affected by the proposed South Boundary Road improvements are shown in **Figure 4-2**. The sensitive natural communities affected by the proposed Gigling Road improvements are shown in **Figure 4-3.**

Although there will be removal of maritime chaparral communities at the South Boundary Road improvement area, the project area is within HMP designated "Development" parcels. Therefore, the loss of habitat was anticipated and mitigated through the preservation and management of over 16,000 acres of open space on former Fort Ord (USACE 1997) and would be considered a **less than significant impact** with implementation and compliance with the HMP.

Only the maritime chaparral community was targeted under the HMP (USACE 1997). Impacts and mitigation measures for coastal oak woodland are addressed further below under **Impacts to Trees**.

### Impacts to Jurisdictional Waters of the U.S., Including Wetlands

No waters of the U.S., including wetlands, were observed within the project area; therefore, there will be **no impacts** to this resource.

### Impacts to Migratory Corridors

The proposed action/project is not located in an area used by native and/or migratory species for movement or nursery sites. The South Boundary Road improvement area parallels or includes the existing roadway. The Gigling Road improvement area is surrounded by development thereby limiting any movement by wildlife. Therefore, the proposed action/project would have **no impact** on migratory corridors.

### Impacts to Trees Protected under the Local Tree Ordinance

An exact count of trees impacted by the proposed action/project is not available at this time because no arborist survey was conducted. However, based on the biological survey, the coastal oak woodland (4.0 acres) and maritime chaparral (13.3 acres) habitats within the South Boundary Road improvement area contain a large number of coast live oak trees. Non-native Monterey pine trees were also observed in scattered locations throughout this improvement area. Coast live oak trees, as well as the non-native Monterey pine and Monterey cypress trees, were identified within the Gigling Road improvement area, but occur largely as planted ornamentals and within the small coastal oak woodland (1.1 acres) at the east end of the Gigling Road improvement area.

The Gigling Road improvement area is located within the City of Seaside and is subject to the City's tree ordinance. According to the *City of Seaside Municipal Code* Section 8.54.020, all trees, including non-native Monterey pine and cypress trees, with a height of ten feet or more or has a circumference of at least 20 inches measured at 24 inches above the ground are protected. The South Boundary Road improvement area is located within the cities of Del Rey Oaks and Monterey and is subject to those cities' tree ordinances. According to the *City of Del Rey Oaks Municipal Code* Section 12.16.030, all single trunked oak trees measuring more than 30 inches in circumference (at two feet above the ground), all multi-trunked oak trees having two trunks with a circumference of at least 40 inches (at two feet above the root crown), and other significant trees on all public and private property within the City of Del Rey Oaks are protected. According to Chapter 37 of the *City of Monterey Municipal Code*, trees located on a vacant private parcel measuring more than two inches in diameter (at four feet six inches above the tree's natural grade), and trees located on a private, developed parcel measuring more than six inches (at four feet six inches above the tree's natural grade) are protected.

Implementation of the proposed action/project will result in the removal of coast live oak, Monterey pine, and Monterey cypress trees. Removal of trees has the potential to reduce habitat resource function and value within the project area. This would be considered a **potentially significant impact**, requiring compliance with the following mitigation measure.

Mitigation Measures

**MM-6a** FORA shall contract with a Registered Professional Forester or Certified Arborist to assist in field adjustments of tree removal and to prepare a tree removal plan, to support a tree removal permit or application, for the proposed action/project after the proposed improvements have been staked in the field. The tree removal plan shall accompany the arborist survey as described under mitigation measures **MM-6c** and **MM-6d** below. The tree removal plan shall indicate:

- the location of each protected tree to be removed for grading and/or construction;
- the location of trees that are proposed for relocation; the location of protected trees that are located adjacent to grading and/or construction limits (i.e. within 20 feet); and
- will indicate that all oak trees which require pruning, are pruned by a Certified Arborist prior to initiation of construction activities.

**Timing/Implementation:** Prior to commencement of construction activities.

**Enforcement/Monitoring:** FORA and the Cities of Seaside, Del Rey Oaks and Monterey and Monterey County, as applicable.

**MM-6b** Any tree or groups of trees to be retained shall be fenced with a four-foot high brightly colored synthetic fence at the outermost edge of the critical root zone. The critical root zone will be measured from the dripline radius taken from the tree trunk to the tip of the farthest reaching branch as determined by a Certified Arborist or Registered Professional Forrester. The fencing shall remain in place until all construction activities are complete. Trenching, grading, soil compaction, parking of vehicles or heavy equipment, stockpiling of construction materials, and/or dumping of materials will not be allowed within the critical root zone.

**Timing/Implementation:** Prior to commencement of construction activities.

**Enforcement/Monitoring:** FORA and the Cities of Seaside, Del Rey Oaks and Monterey and Monterey County, as applicable.

**MM-6c** Within the Gigling Road improvement area, FORA shall contract with a Registered Professional Forester or Certified Arborist to perform an arborist survey. The arborist survey shall include all trees with a height of 10 feet or

more, or has a circumference of at least 20 inches measured at 24 inches above the ground pursuant to Section 8.54.020 of the *City of Seaside Municipal Code*. The survey shall also include landmark oak trees, which are defined as trees 24 inches or more in diameter when measured two feet above the ground, or trees which are visually significant, historically significant, or exemplary of their species.

FORA shall obtain a tree removal permit from the City of Seaside for all trees to be removed within the Gigling Road improvement area. Trees identified to be removed must be replaced at a 1:1 ratio with a minimum 5-gallon approved specimen tree of a species and in an approved location as stated under *City of Seaside Municipal Code Section 8.54.070*.

**Timing/Implementation:** Prior to commencement of construction activities within the Gigling Road improvement area.

**Enforcement/Monitoring:** City of Seaside; FORA.

**MM-6d** Within the South Boundary Road improvement area, FORA shall contract with a Registered Professional Forester or Certified Arborist to perform an arborist survey, which shall include:

- single trunk oaks greater six inches diameter (at two feet above the ground surface) or multi-trunk oaks with a circumference of any two trunks of at least 40 inches (at measured two feet above the root crown) pursuant to Section 12.16.020 of the *City of Del Rey Oaks Municipal Code;*

- any woody perennial plant that has a height of 30 feet or more, or has a circumference of 36 inches or more (at 24 inches above ground) pursuant to Section 12.16.020 of the *City of Del Rey Oaks Municipal Code*; and

- any tree greater than two inches in diameter (at four feet six inches above the natural grade) pursuant to Section 12.16.020 of the *City of Del Rey Oaks Municipal Code*.

- trees located on a vacant private parcel measuring more than two inches in diameter (at four feet six inches above the tree's natural grade) pursuant to Chapter 37 of the *City of Monterey Municipal Code*, and

- trees located on a private, developed parcel measuring more than six inches (at four feet six inches above the tree's natural grade) pursuant to Chapter 37 of the *City of Monterey Municipal Code*.

FORA shall obtain tree removal permits from the cities of Del Rey Oaks and Monterey for trees to be removed within the South Boundary Road improvement area. All protected trees impacted within the City of Del Rey Oaks will be mitigated in accordance with Section 12.16.050.D of the *City of Del Rey Oaks Municipal Code*. All protected trees impacted within the City of Monterey will be mitigated in accordance with Section 37-11 of the *City of Monterey Municipal Code*.

**Timing/Implementation:** Prior to the commencement of construction activities within the South Boundary improvement area.

**Enforcement/Monitoring:** Cities of Del Rey Oaks and Monterey; FORA.

Implementation of these mitigation measures would protect trees within the project area ensuring that removal of any trees is done in accordance with the tree ordinances of the cities of Seaside, Del Rey Oak and Monterey, in order to restore habitat values within the project area, reducing this impact to **less than significant** level.

**Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved local, Regional, or State Habitat Conservation Plan**

The proposed action/project does not conflict with an adopted HCP/NCCPP, Recovery Plan, or other Planning Document and is consistent with the recovery plan for Monterey spineflower (USFWS 1998). The proposed action/project is consistent with the adopted HMP for the former Fort Ord. There is no adopted HCP, but one is being prepared for the former Fort Ord. If the HCP is adopted prior to project initiation, the proposed action/project may be modified to be consistent with the adopted plan. Similarly, the mitigation strategies may be modified to reflect the requirements of the adopted HCP.

## Cultural Resources

**Standards of Significance**: For purposes of this analysis, the proposed action/project would result in a significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the State CEQA Guidelines;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; and/or
- Disturb any human remains, including those interred outside of formal cemeteries.

### Methodology

Basin Research prepared a Cultural Resources Review in September 2009. This review included a records search, literature review, consulted with local Native Americans and performed a field survey in accordance with Section 106 and CEQA. The Cultural Resource Review is included in **Appendix E** of this document.

### Cultural Resources

Previous archaeological field surveys conducted over the former Fort Ord property resulted in mapping of areas of high, medium and low probability for prehistoric resources. According to the *BRP*, although no historic buildings have been identified within the project area, the South Boundary Improvement Area is designated as a 'High Sensitivity' area for archaeological resources. Basin Research conducted a field reconnaissance of the project area in June 2009 in accordance with standard archaeological practice. Previous and current Archaeological investigations for the proposed action/project did not identify any prehistoric sites, historic sites, historic buildings, or any isolated artifacts within or adjacent to or within 0.25 miles of the project Area of Potential Effect (APE).

The State of California Native American Heritage Commission (NAHC) was contacted for a review of the Sacred Lands Inventory, which had findings that were negative. Thirteen Native American individuals/groups were consulted for information regarding known and recorded sites within the APE. Three groups provided responses that recommended the presence of either an archaeological monitor or a Native American or both during ground dist8urbing construction.

Due to the absence of known cultural resources within the area that would be disturbed by the proposed action/project, it is anticipated that the proposed action/project would not result in any impacts to cultural or historic resources. However, since there is a possibility of encountering previously unidentified cultural resources during construction activities, the mitigation measure set forth below would be implemented as necessary to ensure protection of any such discovered cultural resources and as such, the potential impact to cultural resources is less than significant with mitigation incorporated.

Mitigation Measure

**MM-7** In the event that archaeological resources or human remains are discovered during construction, FORA will ensure that all work is stopped within 150 feet of the find until the find can be evaluated by a qualified, professional archaeologist in accordance with 36 CFR Part 800.13(b). In addition, the cultural resources coordinator at the Army Directorate of Environmental and Natural Resource Management (DENR) will be contacted. If the find is determined to be significant, appropriate mitigation measures will be implemented as recommended by the professional archaeologist and the U.S. Army.

**Timing/Implementation:** Prior to the commencement of construction activities within the project area.

**Enforcement/Monitoring:** Cities of Seaside, Del Rey Oaks, and Monterey; FORA.

### Historic Resources

The proposed action/project is not located within or immediately adjacent to historic properties that are listed, determined, or potentially eligible for inclusion on the National Register of Historic Places (NRHP). Therefore, a finding of no historic properties affected is applicable pursuant to 36 CFR Part 80.4(d)(1) and the proposed action/project would result in no impact on archaeological sites or a property that would be included in the California Register. In summary, there were no archaeological or historic resources identified in the project area. Potential impacts of the proposed action/project, if any, would be mitigated to less than significant level with implementation of mitigation measure **MM-7**.

## Geology and Soils

**Standards of Significance:** For purposes of this analysis, the proposed action/project would result in a significant impact if it would:

- Expose people or structures to major geologic hazards (including rupture of known earthquake fault, seismic ground shaking, seismic related ground failure, liquefaction or landslide); and/or
- Result in significant erosion; and/or
- Be located on unstable/adverse soil conditions (including expansive soils) and/or;
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

### Geologic Hazards

According to the *Geotechnical Investigation* prepared by Pacific Crest Engineering Incorporate in October 2007, seismic hazards including ground surface fault rupture, liquefaction, lateral spreading, and landsliding were all found to have a low potential to occur within the project area. The *Geotechnical Investigation* assumed that the project area would experience seismic ground shaking during the lifetime of the project. However, the proposed action/project consists of realignment and associated improvements (e.g. medians, bike path, and sidewalks) of existing roadways. According to the *Geotechnical Investigation*, the proposed action/project would not pose any geologic hazards provided that the recommendations within the *Geotechnical Investigation* were incorporated into the design and construction of the proposed action/project. Designing the proposed action/project without incorporating the recommendations provided in the *Geologic Investigation* could result in geologic hazards affecting the roadway and safety of people to geologic hazards, which would be considered a **potentially significant impact**.

Implementation of the following mitigation measure would ensure that the recommendations provided in the *Geotechnical Investigation* are incorporated into the design, which would reduce this impact to a less than significant level.

Mitigation Measure

**MM-8** FORA shall ensure that the recommendations provided within the *Geotechnical Investigation for Gigling and South Boundary Road Improvement Seaside, California* prepared by Pacific Crest Engineering, Incorporated in October 2007 are incorporated into the final improvement plans. These recommendations include, but are limited to site preparation and grading; cut and fill slopes; new pavement section and overlay designs; utility trenches; lateral pressures; and surface drainage.

**Timing/Implementation:** Prior to final plan approval.

**Monitoring/Reporting:** FORA.

**Soil Erosion**

The surface soils within the project area are classified as having a high potential for erosion. According to Creegan and D'Angelo Consulting Engineers, the South Boundary improvements would result in the export of approximately 2,200 $yds^3$ of soil (21,500 of $yds^3$ of cut, 19,300 $yds^3$ of fill) and the Gigling Road improvements would result in the import of approximately 11,100 $yds^3$ of soil (19,000 $yds^3$ of cut, 30,100 $yds^3$ of fill). Combined, the proposed action/project would result in the net import of approximately 8,900 $yds^3$ of soil. According to Creegan and D'Angelo Consulting Engineers, the total area of disturbance within the project area would be approximately 35.2 acres during construction activities, with the South Boundary improvement area encompassing 19.5 acres and the Gigling Road improvement area encompassing 15.7 acres. Native soil would be removed and replaced with aggregate base prior to paving. Removal of existing vegetation would expose soil to the elements (e.g. wind and rain). The proposed action/project includes erosion control measures such as: installing a construction entrance prior to commencement of grading; having erosion and sediment control measures operable year round; implementing best management practices (BMPs); excavating prior to October 15th; maintaining the site to ensure no sediment laden runoff enters the storm drainage system and public roadway; and hydroseeding exposed surfaces. However, the following mitigation measures would reduce potentially significant impacts from erosion within the project area to a less than significant level.

Mitigation Measure

**MM-9** A Storm Water pollution Prevention Plan (SWPPP) shall be prepared and reviewed for approval by FORA, the cities of Seaside, Del Rey Oaks, and Monterey, and/or the United States Army, as applicable. The erosion control plan shall be included in construction documents for the proposed action/project and shall be implemented during and periodically following

construction. Erosion control measures shall include, but shall not be limited to the following:

- Limit disturbance of soils and vegetation to the minimum necessary for access and construction;
- Confine all vehicular traffic associated with construction to the right-of-way of designated access roads;
- Adhere to construction schedules designed to avoid periods of heavy precipitation or high winds;
- Ensure that all exposed soil is provided with temporary drainage and soil protection when construction activity is shut down during the winter periods;
- Inform construction personnel prior to construction and periodically during construction activities of environmental concerns, pertinent laws and regulations, and elements of the proposed erosion control measures; and
- Plant the finished ground surface with ground cover and continually maintain.

**Timing/Implementation:** Prior to commencement of grading activity.

**Monitoring/Reporting:** Cities of Seaside, Del Rey Oaks and Monterey; FORA.

In summary, the potential geology/soils impacts of the proposed action/project, if any, would be mitigated to **less than significant** level through the implementation of the mitigation measures identified above.

**Soil Characteristics**

As noted above, according to the *Geotechnical Investigation* liquefaction, lateral spreading and landsliding were all found to have a low potential to occur within the project area. Due to the high sand content of the soils in the project area, the potential for soil expansion is low. Therefore, soils would be considered to be stable and have **a less than significant impact** on life or property on the project site.

**Septic System**

The proposed action/project would result in the construction of roadway improvements. Therefore, the proposed action/project would have **no impact** associated with septic tank systems.

## Hazards and Hazardous Materials

**Standards of Significance:** For purposes of this analysis, the proposed action/project would result in a significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard of people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

### Transport, Release and/or Emission of Hazardous Materials

The proposed action/project, which includes the construction of roadways and associated improvements, would not involve the transport, use, emit or disposal of hazardous materials. Therefore, the proposed project's exposure to the transport, release and/or emission of hazardous materials would be considered a **less than significant impact.**

### Hazard Materials Site

The entire Fort Ord property was placed on the National Priorities List of Hazardous Waste Site (Superfund List) in 1990. Since then numerous contamination sites have been investigated, remediated, and approved for property transfer by the EPA.

The main area of concern for the project is the Multi-Range Area (MRA), which occupies approximately 8,000 acres located in the southwestern portion of the former Fort Ord. The

MRA is bounded by Gigling Road to the north, Barloy Canyon Road to the east, South Boundary Road to the south, and General Jim Moore Road to the west.

The MRA was reportedly used since the opening of the base for ordinance training exercises. Some of the ranges at the MRA were used for small arms training activities only, while other ranges were used for a variety of training activities. Over the years, different types of ordinance were used during training activities at the various ranges within the MRA. These ordinance included hand grenades, mortars, rockets, mines, artillery rounds, and small arms rounds. Some training activities also involved the use of petroleum hydrocarbons. The MRA has been inactive since the closure of Fort Ord in 1994. Lands within the MRA have the highest density of MEC, with specific target areas having the highest densities. Types of MEC found at Fort Ord include artillery projectiles, rockets, hand grenades, land mines, pyrotechnics, bombs, demolition materials, and other items. Known Munitions Response sites are posted with warning signs and are off-limits to unauthorized people.

There are MRAs adjacent to the proposed South Boundary Road realignment Gigling Road which means there are potential MEC's located within and adjacent to the project area. The MRA has not been decontaminated by the U.S. Department of the Army to a level sufficient to assure the protection of the public consistent with the proposed use of the property for residential development. Appropriate fencing and signage has been placed around these sites in order to minimize the incidence of trespassing until further removal/remediation has taken place.

Since these munitions and response sites are located within and near the project area, there exists a potential for encountering munitions and explosives of concern during construction of the proposed action/project. This would be considered a **potentially significant impact**. Implementation of the following mitigation measures would reduce this potentially significant impact to a less than significant level.

Mitigation Measure

**MM-10a** FORA shall obtain formal approval from the U.S. Army, U.S. EPA, and the California Department of Toxic Substances and Control (DTSC) that the proposed construction areas including storage, grading, and transport areas are free of Munitions and Explosives of Concern (MEC) within a safe distance of said activities as approved by the U.S. Army, U.S. EPA and the DTSC.

**Timing/Implementation:** Prior to any grading or construction activity within the project area.

**Monitoring/Reporting:** FORA, U.S. Army, U.S. EPA and DTSC.

**MM-10b** Bid documents and construction plans and documents are to include a requirement that before construction activities commence on the project, construction supervisors and crews will attend a U.S. Army sponsored munitions and explosives of concern (MEC) safety briefing. This briefing will

identify the variety of MEC that may exist within the project area and describe the actions to be taken if a suspicious item is discovered during construction activities. In the event that MEC or other suspicious materials are found within the project area, the contractor will stop work immediately and contact the U.S. Army Environmental office. Under no circumstance will anyone be allowed to handle MEC or other suspicious material.

**Timing/Implementation:** Prior to issuance of bid and/or construction documents.

**Monitoring/Reporting:** FORA and the U.S. Army.

Compliance with mitigation measure **MM-10a** would require that the U.S. Army cleanup with oversight by the State Department of Toxic Substances and Control (DTSC) remove all MEC within the project area prior to construction activities beginning at the project site. Once clean up is complete and construction is allowed to begin within the project area, mitigation measure **MM-10b** would require that all construction personnel attend a safety briefing. In summary, the potential impacts of the proposed action/project from munitions and explosives of concern would be reduced to a **less than significant** level with compliance of these mitigation measures.

### Airport Hazards

The proposed action/project is located approximately 0.5 miles northeast of the Monterey Peninsula Airport and 3.0 miles south of the Marina Municipal Airport. According to the Comprehensive Land Use Plan for the Monterey Peninsula Airport, a portion of the Approach Surface for Runway 6-24 at the Monterey Peninsula Airport crosses the existing alignment of South Boundary Road near General Jim Moore Boulevard. However, Runway 6-24 is no longer in service and has been replaced by Runway 10L-28R, which is parallel to the main runway and has a flight path that does not cross the improvement area. Therefore, construction and operation of the proposed action/project would not affect or influence any airport land use plan or flight patterns within the project area or expose people to excess noise levels during construction of the proposed action/project and the airport hazards would be considered **less than significant**.

### Emergency Response Plan

According to the *BRP*, General Jim Moore Boulevard is identified as an emergency evacuation route (*BRP* Figure 4.6-2, Fire and Flood Evacuation Routes). Implementation of the proposed action/project would improve the flow of traffic to General Jim Moore Boulevard. Therefore, implementation of the proposed action/project would have a **beneficial impact** on emergency response times with redevelopment of the former Fort Ord.

### Wildland Fires

The proposed action/project would not include the development of structures or result in an increase in population that would increase risks of exposure to wildland fires. Therefore, there would be **no impact** associated with wildland fires.

## Hydrology and Water Quality

**Standards of Significance:** For purposes of this analysis, the proposed action/project would result in a significant impact if it would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Increase flood hazards to people or structures;
- Create or contribute runoff water which would exceed capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures, which would impeded or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a dam or levee; and/or
- Be at risk by inundation from seiche, tsunami or mudflows.

### Storm Water Runoff

The proposed action/project would create new impervious surfaces associated with the proposed roadway improvements, sidewalks and bike trails. These impervious surfaces may add to the amount of storm water runoff generated by the proposed action/project under certain storm conditions. This increase in the amount of impervious surfaces may result in an increase in the amount and rate of storm water flow draining from the project area during a storm.

Drainage would be collected via curbs and gutters installed at the edges of the proposed roadway and conveyed to an underground infiltration systems designed to handle runoff from 100-year storm events, as shown in the improvement plans (**Appendix B**). The runoff would be retained within the underground infiltration system and would not result in a net increase in the amount of storm water runoff from the project area over existing conditions. With implementation of the proposed drainage and infiltration system, the proposed action/project would not create or contribute runoff, which would exceed the capacity of the planned storm water drainage system, or result in flooding. Therefore, this would be considered a **less than significant impact.**

**Water Quality**

Short-Term Water Quality Impacts

The proposed action/project could result in soil erosion during construction activities such as clearing, grading, and asphalt removal. The proposed action/project would result in the disturbance of approximately 35.2 acres. Grading activities would include approximately 2,200 yds3 of exported soil (21,400 yds3 of cut, 19,300yds3 of fill) for the South Boundary Road improvements, and approximately 11,100 yds3 of imported soil (19,000 yds3 of cut, 30,100 yds3 of fill) for the excavation of approximately 40,202 $yds^3$ of soil for construction of the proposed roadway alignment and associated improvements. Initial erosion from the project area could result in degradation of surface water quality by increasing sedimentation of water bodies downstream of the project area. In addition, construction activities have the potential to introduce small amounts of hydrocarbons and other contaminants from the use of vehicles and equipment.

No watercourses are located in the vicinity of the improvement area. FORA would implement the erosion control plan and SWPPP described in mitigation measure **MM-10**, which would be included in the construction documents for the proposed action/project. Implementation of an erosion control plan and SWPPP would reduce the short-term effects of soil erosion. In addition, because the proposed action/project would disturb more than one acre during grading activities, the following mitigation measure would ensure that storm water discharges during construction activities do not result in a potentially significant impact.

Mitigation Measure

**MM-11** FORA shall obtain a National Pollution Discharge Elimination Systems Program General Construction Permit from the State Water Resources Control Board (SWRCB) as required by the Federal Clean Water Act. FORA shall comply with all the provisions of the permit including the use of best management practices and preparation of and compliance with a storm water pollution prevention program (SWPPP).

**Timing/Implementation:** Prior to construction activities.

**Monitoring/Reporting**: FORA and RWQCB.

Long-Term Water Quality Impacts

Storm water runoff from the improved roadway, sidewalks and bikeways could contain urban pollutants such as grease and oil that could adversely affect water quality in local drainages. The proposed roadway improvements would include curbs and gutters that would convey storm water runoff in the project area to a proposed subsurface percolation system that would be designed to include an oil and sediment interceptor tank to reduce the affects of contaminants from surface water runoff within the project area.

Although storm water, and the constituents it may contain, will not enter the Monterey Bay, this water will eventually enter the groundwater basin after percolating through the subsurface infiltration system. The oil and sediment interceptor tank would retain the contaminants contained within the urban runoff generated within the project area. Therefore, implementation of these improvements would ensure that urban pollutants would be filtered in the subsurface infiltration system and would have a **less than significant impact** on surface or groundwater quality.

### Groundwater Quantity

The proposed action/project is a roadway improvement project and would not draw from the groundwater basin. As such, the proposed action/project would not substantially deplete groundwater supplies or interfere with groundwater recharge. The proposed subsurface infiltration system will help recharge the groundwater basin. Therefore, the proposed action/project would have a **beneficial impact** on the groundwater basin.

### Flooding

According to the *BRP* and FEMA Flood Insurance Rate Maps 06053C03333G, 0653C0329G, and 06053C0195G (April 2009), the project area is not located within a 100-year flood or dam inundation zone. Therefore, the proposed action/project would not impede or redirect flood flows or expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of a failure of a dam or levee and there would be **no impacts** associated with flooding.

## Land Use and Planning

**Standards of Significance:** For purposes of this analysis, the proposed action/project would result in a significant impact if it would:

- Physically divide an established community; and/or
- Result in land use conflicts with existing or planned uses; and/or
- Conflict with adopted land use plans and ordinances of the community where it is located.

### Fort Ord Reuse Plan

As identified in the *BRP*, redevelopment of the former Fort Ord would increase the demand for transportation infrastructure and services within both the former Fort Ord and the region. The circulation concept for the former Fort Ord included strategies and improvements within the base, as well as regionally significant facilities that provide access to the former Fort Ord.

In developing the roadway network for the *BRP*, the key goals identified were to reduce the infrastructure needs, both internally to the former Fort Ord and regionally reduce the traffic volumes resulting from redevelopment of the former Fort Ord on key roadways as an effort to eliminate or reduce deficient service levels and other traffic related impacts. This is accomplished by enhancing regional access alternatives, providing additional local access routes, and enhancing the internal circulation system to reduce through trips on roadways in the higher density residential or otherwise sensitive areas. The proposed action/project is considered implementation of the circulation network of the *BRP* and TAMC's *Regional Transportation Plan* and is consistent with the *City of Seaside General Plan, City of Del Rey Oaks General Plan, City of Monterey General Plan,* and the *BRP*.

### City of Seaside General Plan

According to the *City of Seaside General Plan,* development in the vicinity of the Gigling Road improvement area would result in the construction of housing associated with the military, medium and high density housing, mixed use developments, and public/institutional developments. The *BRP* encourages connecting new residential neighborhoods in the former Fort Ord to older existing neighborhoods in the City of Seaside. The proposed action/project would assist in implementation of this connection.

### City of Del Rey Oaks General Plan

According to the *City of Del Rey Oaks General Plan*, future development in the vicinity of the South Boundary Road improvement area would result in the construction of the Resort at Del Rey Oaks and a habitat conservation area. Implementation of the Resort at Del Rey Oaks would include a championship 18-hole golf course and associated amenities, a 104-room Boutique Hotel, a 250-room Resort Hotel, 86 single-family detached homes, 20 single-family detached homes for seniors, 376 condominiums, 71 townhomes, 138 affordable apartments, a 96 unit condo hotel, a senior residential care facility, open space, recreation uses, and retail uses. The proposed South Boundary Road improvements would provide access to the proposed Resort at Del Rey Oaks; therefore, it would not conflict with the proposed uses and would further aid improving roadway operations.

### City of Monterey General Plan

According to the *City of Monterey General Plan*, the eastern end of the South Boundary Road improvement area is designated for development of Industrial uses. The proposed action/project would not physically divide an established community; result in land use conflicts with existing and planned uses; or conflict with adopted land use plans and

ordinances. Therefore, implementation of the proposed action/project would result in a **less than significant impact** to land use and planning.

## Noise

**Standards of Significance:** For purposes of this analysis, the proposed action/project would result in a significant impact if it would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies.
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels.
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

Temporary noise impacts would be associated with short-term construction-related activities. Long-term permanent increases in noise levels would be associated with potential increases in traffic noise levels. Potential increases in groundborne vibration levels would be primarily associated with short-term construction-related activities. For purposes of this analysis and where applicable, the noise standards of local jurisdictions were used for evaluation of noise impacts associated with the proposed project.

The following significance thresholds used for the assessment of noise-related impacts are based on the CEQA Guidelines, applicable noise standards, and commonly applied environmental noise criteria, as discussed earlier in this report.

- **Short-term Noise Impacts.** Short-term construction noise impacts would be considered significant if construction activities would result in a substantial increase in ambient noise levels during the more noise-sensitive evening and nighttime hours (i.e., 7:00 PM to 7:00 AM).

- **Long-term Noise Impacts.** Long-term increases in traffic noise would be considered significant if the proposed project would result in a substantial increase in ambient noise levels at nearby noise-sensitive land uses or if the proposed project would result in traffic noise levels that would exceed applicable land use compatibility noise standards.

- **Exposure to Groundborne Vibration.** Groundborne vibration levels would be considered significant if predicted short-term construction or long-term operational groundborne vibration levels attributable to the proposed project would exceed recommended criteria at nearby existing or proposed onsite structures.

For purposes of this analysis, significant increases in ambient noise levels were based on FICON-recommended criterion. Accordingly, significant increases in ambient noise levels would be defined as an increase of 5 dBA, or greater, where the ambient noise environment is less than 60 dBA; 3.0 dBA, or greater, where the ambient noise environment is between 60 and 65 dBA; and an increase of 1.5 dBA, or greater, where the ambient noise environment exceeds 65 dBA. The rationale for these criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause significant annoyance (Ambient 2009).

Under contract with PMC, Ambient Air Quality and Noise Consulting prepared a noise impact analysis for the proposed action/project in August 2009. This noise impact analysis, focused on impacts along the length of the proposed action/project. The purpose was to determine whether noise attenuation would be required to address traffic noise levels at existing sensitive receptors and future sensitive receptors when the land within the former Fort Ord is redeveloped. The findings of the noise impact analysis are summarized and supplemented with additional information.

**Short-Term Construction Impacts**

Construction noise in any one particular area would be temporary and would include noise from activities such as excavation, grading, and paving, and pouring of concrete. Construction noise typically occurs intermittently and varies depending on the nature of the construction activities being performed. Noise generated by construction equipment can reach high levels for brief periods.

The United States Environmental Protection Agency (US EPA) has found that intermittent individual equipment noise levels range from approximately 74 dBA to more than 89 dBA for brief periods. Typical uncontrolled noise levels generated by individual pieces of construction equipment at a distance of 50 feet are listed in **Table 5-2**. The highest noise levels would occur during activities involving the use of heavy-duty off-road equipment, including grading and excavation activities.

**Table 5-2**
**Typical Construction Equipment Noise Levels**

| Equipment | Typical Noise Level (dBA Lmax) 50 feet from Source |
|---|---|
| Roller | 74 |
| Saw, Concrete Vibrator | 76 |
| Generator, Air Compressor | 81 |
| Concrete Pump, Compactor | 82 |
| Crane, Mobile | 83 |
| Loader, Grader, Dozer, Concrete Mixer | 85 |
| Truck, Jack Hammer | 88 |
| Paver | 89 |

Source: Ambient Air Quality and Noise Consultants 2009

Predicted construction-generated noise levels at nearby land uses could result in intermittent and short-term increases in ambient noise levels. Because exterior ambient noise levels typically decrease during the nighttime hours as community activities (e.g., commercial activities, vehicle traffic) decrease, construction activities performed during the more noise-sensitive nighttime hours (i.e., 10 P.M. to 7 A.M.) are of particular concern given the increased potential for annoyance and potential sleep disruption for occupants of nearby residential dwellings and medical care facilities. The proposed action/project does not include restrictions on the hours during which construction activities would occur. As a result, construction activities occurring during the more noise-sensitive nighttime hours could result in increased levels of annoyance and potential sleep disruption for occupants of nearby noise-sensitive land uses. Noise-generating construction activities associated with the proposed roadway improvements would be considered a **potentially significant short-term impact**, requiring compliance with the following mitigation measures.

**Mitigation Measures**

**MM-12a** FORA shall limit noise generated by construction operations by putting the following language on final improvement plans for the proposed action/project: "Noise generating activities (excluding activities that would result in a safety concern to the public or construction workers) are limited to Monday through Friday between 7:00 A.M. and 7:00 P.M."

**Timing/Implementation:** During the course of construction.

**Monitoring/Reporting:** FORA; Cities of Seaside, Del Rey Oaks, and Monterey.

**MM-12b** FORA shall limit noise generated by construction operations by implementing the following:

- Construction equipment and equipment staging areas shall be located at the furthest distance possible from nearby noise-sensitive land uses.

- Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.
- When not in use, motorized construction equipment shall not be left idling.

**Timing/Implementation:** During the course of construction.

**Monitoring/Reporting:** FORA; Cities of Seaside, Del Rey Oaks, and Monterey.

Implementation of the above mitigation measures would reduce equipment noise, and potential for sleep disruption. The use of exhaust mufflers and engine shrouds would reduce individual equipment noise levels by approximately 10 dBA. Limitations on the hours of construction, idling of construction equipment, and the location of equipment staging areas away from nearby land uses would reduce the potential for increased levels of annoyance and sleep disruption. Implementation of the above mitigation measures and given that construction activities would be intermittent and short-term, construction-generated noise levels associated with the proposed action/project would be reduced to a **less than significant** level.

**Long-Term Operational Impacts**

Implementation of the proposed action/project would not result in an increase in traffic volumes along Gigling Road or South Boundary Road. Typically, a doubling of vehicle traffic would be required before a noticeable increase (i.e., 3 dBA or greater) in roadway traffic noise levels would occur. Although the proposed action/project would not result in an increase in traffic volumes, the proposed improvements would include widening of the existing roadways, which would result in the relocation of some vehicle traffic closer to existing nearby land uses. In some locations, the addition of an additional travel lane would relocate vehicle traffic approximately 12 feet closer to adjacent land uses.

To determine the increase in traffic noise levels associated with the proposed roadway improvements, the FHWA traffic noise prediction model was used to predict traffic noise levels for existing and proposed roadway configurations. Modeling was conducted for both existing and future cumulative traffic conditions. Increases in traffic noise levels at nearby land uses were determined by comparing predicted traffic noise levels with and without implementation of the proposed improvements. Predicted increases in traffic noise levels; as well as, predicted traffic noise levels at the nearest land uses associated with the proposed Gigling Road and South Boundary Road reconstruction projects are summarized in **Table 5-3** and **Table 5-4**, respectively, and discussed separately, as follows:

Gigling Road Improvement Area

As noted earlier in this study, the nearest noise-sensitive land uses located along Gigling Road consist of residential housing, the nearest of which is located approximately 100 feet

south of the centerline of Gigling Road. Various public and office-related uses are also located within approximately 100 feet of the centerline of Gigling Road.

The proposed improvements to Gigling Road would result in estimated increases in traffic noise levels at the nearest land uses of approximately 0.5 dBA CNEL, or less as shown in **Table 5-3**. Predicted traffic noise levels at the nearest land uses would be approximately 58 dBA CNEL, or less, and would not exceed the minimum exterior noise standard of 65 dBA CNEL. Assuming an average exterior-to-interior noise reduction of 20 dBA, predicted interior noise levels of nearby noise-sensitive occupied structures would not exceed the normally applied interior noise standard of 45 dBA CNEL.

**Table 5-3**
**Predicted Traffic Noise Levels for the Gigling Road Improvements**

| Conditions | Predicted Noise Level at 100 ft from Roadway Centerline (dBA $L_{dn}$/CNEL)[1] | | | Significant Increase?[2] | Predicted Noise Level at Nearest Land Uses With Project Implementation[3] | Exceeds Applicable Noise Standards at Nearest Land Uses?[4] |
|---|---|---|---|---|---|---|
| | Without Project | With Project | Increase | | | |
| Existing Conditions | 56.86 | 57.40 | 0.54 | No | 57.40 | No |
| Future Conditions | 58.31 | 58.66 | 0.35 | No | 58.66 | No |

*Notes: 1. Traffic noise levels were predicted using the FHWA roadway noise prediction model based on traffic information obtained from the City of Seaside General Plan, Final EIR (2004). Existing and future scenarios are based on year 2004 and 2020 traffic conditions. Modeled estimates assume no natural or man-made shielding (e.g., vegetation, berms, walls, buildings).*

2. *Significant increase is defined as an increase of 5 dBA in areas where ambient noise levels are less than 60 dBA CNEL/Ldn; an increase of 3 dBA where ambient noise levels range from 60 to 65 dBA $L_{dn}$/CNEL; and an increase of 1.5 dBA where ambient noise levels at noise-sensitive receptors exceed 65 dBA $L_{dn}$/CNEL*
3. *The nearest land uses consist of residential and commercial/office land uses located approximately 100 feet from the roadway centerline.*
4. *The City of Seaside's "normally acceptable" exterior land use compatibility noise standard for residential and commercial/office uses is 60 and 65 dBA CNEL, respectively. Based on predicted exterior noise levels and assuming an average exterior-to-interior noise reduction of 20 dBA, predicted interior noise levels would not exceed corresponding noise standards of 45 and 50 dBA CNEL for residential and commercial/office uses, respectively.*

Source: Ambient Air Quality and Noise Consultants 2009.

South Boundary Road Improvement Area

The nearest noise-sensitive land uses located along South Boundary Road consist of multi-family residential dwellings located approximately 750 feet southwest of South Boundary Road, along Justin Court. The nearest commercial office uses consist of medical office buildings located approximately 300 feet to the south, along Upper Ragsdale Drive. The Community Hospital building is also located along Upper Ragsdale Drive, approximately 800 feet south of South Boundary Road.

As noted in **Table 5-4**, the proposed improvements to South Boundary Road would result in estimated increases in traffic noise levels at the nearest land uses of approximately 0.2

dBA CNEL, or less. Based on the modeling conducted, predicted future noise levels at the nearest residential and commercial land uses would reach levels of approximately 51 and 57 dBA CNEL, respectively.

**Table 5-4**
**Predicted Traffic Noise Levels for the South Boundary Road Improvements**

| Conditions | Predicted Noise Level at 100 ft from Roadway Centerline (dBA $L_{dn}$/CNEL) | | | Significant Increase?[2] | Predicted Noise Level at Nearest Land Uses With Project Implementation[3] | | Exceeds Applicable Noise Standards at Nearest Land Uses?[4] |
|---|---|---|---|---|---|---|---|
| | Without Project | With Project | Increase | | MFR | Office | |
| Existing Conditions | 58.65 | 58.87 | 0.22 | No | 45.74 | 51.71 | No |
| Future Conditions | 64.36 | 64.39 | 0.03 | No | 51.26 | 57.23 | No |

1. *Traffic noise levels were predicted using the FHWA roadway noise prediction model based on traffic information obtained from the traffic analysis prepared for this project (Higgins Associates 2008). Modeled estimates assume no natural or man-made shielding (e.g., vegetation, berms, walls, buildings).*
2. *Significant increase is defined as an increase of 5 dBA in areas where ambient noise levels are less than 60 dBA CNEL/Ldn; an increase of 3 dBA where ambient noise levels range from 60 to 65 dBA $L_{dn}$/CNEL; and an increase of 1.5 dBA where ambient noise levels at noise-sensitive receptors exceed 65 dBA $L_{dn}$/CNEL*
3. *The nearest land uses consist of Multi-family residential (MFR) and office uses. The nearest MFR dwelling unit is located approximately 750 feet south of the roadway centerline. The nearest office use is located approximately 300 feet south of the roadway centerline.*
4. *The City of Monterey General Plan identifies "normally acceptable" exterior land use compatibility noise standards of 65 and 70 dBA CNEL for MFR and office uses, respectively. The City of Del Rey Oaks General Plan, Noise Policy N-4, identifies an exterior noise standard of 65 dBA CNEL and an interior noise standard of 45 dBA CNEL. Based on predicted exterior noise levels and assuming an average exterior-to-interior noise reduction of 20 dBA, predicted interior noise levels would not exceed corresponding noise standard of 45 dBA CNEL.*

Source: Ambient Air Quality and Noise Consultants 2009.

Predicted traffic noise levels at nearby land uses would not exceed applicable minimum exterior noise standards identified by either the City of Del Rey Oaks or the City of Monterey. Based on predicted exterior noise levels and assuming an average exterior-to-interior noise reduction of 20 dBA, predicted interior noise levels of nearby noise-sensitive occupied structures would not exceed 45 dBA CNEL.

Since the proposed action/project would not result in a significant increase in ambient noise levels that would exceed applicable noise standards, this impact would be considered a **less than significant impact**. No mitigation measures are necessary.

### Groundborne Vibration

Ground vibration spreads through the ground and diminishes in strength with distance. The effects of ground vibration can vary from no perceptible effects at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels. At the highest levels of vibration, damage to

structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely result in structural damage.

Long-term operational activities associated with the proposed project would not involve the use of any equipment or processes that would result in potentially significant levels of ground vibration. Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Construction activities associated with the proposed development would likely require the use of various tractors, trucks, and jackhammers. Groundborne vibration levels associated with construction equipment are summarized in **Table 5-5**. Ground vibration generated by construction equipment would be less than 0.09 inches per second ppv at 25 feet. The nearest existing structures are located in excess of 25 feet from the proposed roadway improvement areas. Since ground vibration levels diminish in strength with increased distance from the source, predicted vibration levels would not exceed recommended criteria for structural damage and human annoyance (0.2 and 0.1 in/sec ppv, respectively) at nearby land uses. Short-term groundborne vibration impacts associated with the proposed roadway reconstruction projects would be considered a **less than significant impact**. No mitigation measures are necessary.

**Table 5-5**
**Representative Vibration Source Levels for Construction Equipment**

| Equipment | Peak Particle Velocity at 25 Feet (in/sec ppv) |
|---|---|
| Large Tractors | 0.089 |
| Caisson Drilling | 0.089 |
| Loaded Trucks | 0.076 |
| Jackhammer | 0.035 |
| Small Tractors | 0.003 |

Source: Ambient Air Quality and Noise Consultants 2009.

### Increase in Ambient Noise Levels

Long-term Operational Impacts

Implementation of the proposed action/project would not result in an increase in traffic volumes along Gigling Road or South Boundary Road. Typically, a doubling of vehicle traffic would be required before a noticeable increase (i.e., 3 dBA or greater) in roadway traffic noise levels would occur. Although the proposed action/project would not result in an increase in traffic volumes, the proposed improvements would include widening of the existing roadways, which would result in the relocation of some vehicle traffic closer to existing nearby land uses. In some locations, the addition of an additional travel lane would relocate vehicle traffic approximately 12 feet closer to adjacent land uses. However, as noted above, the proposed improvements would not result in a significant increase in ambient noise levels that would exceed applicable noise standards at nearby

land uses. Therefore, the long-term noise impacts associated with the proposed roadway reconstruction projects would be considered a **less than significant** impact.

Short-Term Construction Impacts

Construction activities occurring during the quieter nighttime hours could result in increased levels of annoyance and potential sleep disruption to occupants of nearby land uses. Therefore, construction generated noise levels associated with the proposed action/project would be considered a **potentially significant** impact. However, implementation of mitigation measure **MM-12a** and **MM-12b** would reduce this impact to a **less than significant** level. No further mitigation measures are required.

**Airport Noise Impacts**

The proposed action/project is located between 0.5 (South Boundary Road) and 4.5 (Gigling Road) miles northeast of the Monterey Peninsula Airport and outside of any designated flight paths. However, implementation of the proposed action/project, a roadway project, would not result in increased exposure of sensitive receptors to aircraft noise levels at nearby airports, nor would the proposed project interfere with nearby airport operations. Therefore, this would be considered a **less than significant** impact.

## Transportation and Circulation

**Standards of Significance:** For purposes of this analysis, the proposed action/project would result in a significant impact if it would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system; and/or
- Exceed, either individually or cumulatively, a level of service standard established by a County congestion management agency for designated roads or highways; and/or
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; and/or
- Substantially increase hazards due to a design feature; and/or
- Result in inadequate emergency access; and/or
- Result in inadequate parking capacity; and/or
- Conflict with adopted policies, plans, or programs supporting alternative transportation.

Hatch Mott MacDonald (formerly Higgins Associates) performed traffic engineering and geometric design services for the South Boundary Road improvements, which are included in the *FORA-CIP*. This section is based on those analyses, proposed roadway improvement

plans prepared by Creegan and D'Angelo Consulting Engineers, the *BRP and the FORA-CIP*.

**Short-Term Operations**

The proposed action/project would result in short-term traffic disturbances during construction, when traffic would have to be periodically delayed. Adequate traffic circulation and the safety of motorists and workers during construction activities would be assured through implementation of normal practices such as the placement of delineators, signs, barricades, etc., as specified in the state's streets and highways manual and vehicle code. These measures would reduce the short-term construction disturbances and potential safety hazards to a **less than significant** level. No mitigation would be required.

**Long-Term Operations**

The proposed action/project would not generate traffic itself, but would provide improvements to the transportation system that would improve the levels of service and provide adequate levels of service through 2030. The planned roadway realignment of South Boundary Road, and the widening of both roadways and associated improvements are consistent with the *FORA-CIP FY 2008/2009 through 2021/2022*. These plan lines are also consistent with the General Plans for the cities of Seaside, Del Rey Oaks, and Monterey. The proposed action/project generally includes roadway widening, intersection improvements, paved shoulders/bicycle lanes, curbs, median islands, and planting strips. Recommended traffic controls at the intersection of South Boundary Road/General Jim Moore Boulevard are to be installed as part of the development of the Resort at Del Rey Oaks and are not part of the proposed project. The specific improvements planned for each section of roadway are described previously in **Chapter 2** and shown previously in **Figures 2-3a** through **2-3g** and **Figures 2-4a** through **2-4e** of this document. As such, the proposed action/project would have a **beneficial** impact to the existing circulation system.

**Emergency Access**

According to the *BRP* (**Figure 4.6-2, Fire and Flood Evacuation Routes**), General Jim Moore Boulevard is identified as an emergency evacuation route on the former Fort Ord. Implementation of the proposed action/project would improve the level of service to this route by enabling South Boundary Road as an additional access route from the Ryan Ranch Business Park, which is in a fire hazard area. According to the *BRP,* Gigling Road is an emergency evacuation route and implementation of the proposed action/project would improve the level of service along the project roadway. Therefore, implementation of the proposed action/project would improve Gigling Road as an emergency evacuation route and South Boundary Road as a connector to an emergency evacuation route (General Jim Moore Boulevard); therefore, have a **beneficial impact** on emergency response times with redevelopment of the former Fort Ord.

**Alternative Transportation**

South Boundary Road

The proposed action/project includes sidewalks along the entirety of both the northern and southern frontages of South Boundary Road, between General Jim Moore Boulevard and Rancho Saucito Lane. These will connect with proposed sidewalks along General Jim Moore Boulevard to the west, and Upper Ragsdale to the south. No formal bicycle lanes are proposed along South Boundary Road. Instead, the shoulders will be sufficient in width for use by bicyclists.

Currently, transit service in the study area is limited. Monterey-Salinas Transit (MST) currently operates only one transit line in the area, Line 6, which travels along General Jim Moore Boulevard. No transit currently services South Boundary Road. In order to accommodate future transit demand, Hatch Mott MacDonald recommended that bus turnouts be provided along General Jim Moore Boulevard and/or South Boundary Road; their placement should be determined in cooperation with MST. The proposed action/project includes six bus stops, three in each direction. Pairs of bus stops are located near the future Community Center Access Road, the future Southwest Access Road, and the future Resort Loop Road West.

Gigling Road

MST has prepared a manual to integrate transit and land use planning in Monterey County. In order to ensure that the proposed bus stops are designed according to MST's *Designing for Transit* manual the following mitigation has been provided.

Mitigation Measure

**MM-13** Improvement plan shall be submitted to Monterey-Salinas Transit for review and approval of bus stop configurations to ensure that they are consistent with the *Designing for Transit* guidelines.

**Timing/Implementation:** Prior to final approval of improvement plans.

**Monitoring/Reporting:** FORA/MST.

Implementation of the above mitigation measure would ensure that the propose bus stops are designed in accordance with MST's standards, which would ensure that the proposed action/project would not conflict with adopted policies, plans, or programs supporting alternative transportation and reduce this impact to a **less than significant** level.

**Medians and Special Event Traffic**

South Boundary Road

A striped median provided along South Boundary, instead of a raised median. This will allow the median to be used as a traffic lane during special events at Mazda Raceway Laguna Seca, providing additional capacity and reducing vehicle queues. Currently, only one lane of traffic is used for entrance and egress during events, with the opposing lane reserved for emergency use only.

Channelization of the traffic during special events would need to be enforced using traffic cones and temporary signing along South Boundary Road. The City of Del Rey Oaks, City of Monterey, Monterey County, and the Sports Car Racing Association of the Monterey Peninsula (SCRAMP, the entity that organizes events at Laguna Seca) should work together on the development of traffic control plans that detail the use of the median as a traffic lane. These control plans would identify the placement of traffic cones and signage to be used for special events at the Mazda Raceway at Laguna Seca.

### Air Traffic Patterns

The proposed action/project is located between 0.5 (South Boundary Road) and 4.5 (Gigling Road) miles northeast of the Monterey Peninsula Airport and outside of any designated flight paths. Therefore, construction and operation of the proposed action/project would not result in a change to air traffic patterns. No mitigation would be required.

## Utilities and Service Systems

**Standards of Significance:** For purposes of this analysis, the proposed action/project would result in a significant impact if it would:

- Require the construction of new public facilities, the construction of which would cause significant environmental effects; and/or
- Directly affect a major utility line or facility.

### Public Services

The proposed action/project would have **no impact** police, fire, school, recreational, or other public services, since it would not result in new development and a subsequent increase in population that would result in increased demand for such services.

### Utilities

Likewise, the proposed action/project would not result in a substantial increase in demand for domestic water, sanitary sewer service, solid waste disposal, electric power, natural gas, or telephone service.

The South Boundary Road improvements include installation of 14-inch recycled water lines and 24-inch potable water lines as well as, 15-inch storm drain lines and catch basins that are connected to the underground infiltration system. The proposed action/project would not affect the small existing drainage swale that parallels South Boundary Road, which would remain an open channel. According to the *Plan for Services* for the Resort at Del Rey Oaks, there would be a 10-inch sanitary sewer line and a joint trench containing gas, electrical, telephone and cable infrastructure within the South Boundary Road right-of way between General Jim Moore Boulevard and the proposed Community Center Access.

The Gigling Road improvements include installation of a storm water collection and infiltration system similar to the system proposed at South Boundary Road. PG&E electric power lines run parallel, at varying distances on both the north and south sides of the existing and proposed alignment of Gigling Road. These existing power poles and lines would be relocated by others.

Although the proposed action/project would extend service area, there would be no increased demand for water, sanitary sewer, or solid waste associated with the proposed action/project. The increased demand for stormwater drainage would be accommodated on-site through an underground collection and infiltration system that will decontaminate storm water runoff prior to recharging the groundwater basin. In summary, the proposed action/project would result in **less than significant impact** to utilities and service systems.

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# Chapter 6

# Protection from Environmental Health Risks and Environmental Justice

# CHAPTER 6: ENVIRONMENTAL JUSTICE AND PROTECTION FROM ENVIRONMENTAL HEALTH RISKS

On February 11, 1994, President Clinton issued Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations." This Executive Order is designed to focus the attention of federal actions Pursuant to Presidential Executive Order 13045, dated April 21, 1997. The proposed action/project adheres to the guidelines for the protection of children from environmental health and safety risks.

In accordance with Presidential Executive Order 12898, the proposed action/project is consistent with the guidelines established for federal actions to address environmental justice in minority and/or low-income populations. Principles set forth in the report on the National Performance Review require that the proposed action/project not result in a "disproportionately high and adverse human health or environmental effects of its programs, policies, activities on minority populations and low-income populations..."

The U.S. Army has developed an agency-wide environmental justice strategy that corresponds to the above-referenced Executive Orders. This strategy promotes enforcement of health and environmental statutes in areas with minority and/or low-income populations; improves research and data collection relating to the environmental health of minority and low-income populations; and identified differential patterns of natural resources consumed by minority and low-income populations. In addition, the environmental justice strategy will include, where appropriate, a timetable for undertaking identified revisions and consideration of socio-economic implications of the revisions.

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# Chapter 7

# Agencies and Persons Contacted

# CHAPTER 7: AGENCIES AND PERSONS CONSULTED

## Fort Ord Reuse Authority

| | |
|---|---|
| James M. Arnold | Senior Project Manager |

## Association of Monterey Bay Area Governments (AMBAG)

| | |
|---|---|
| Randy Deshazo | Senior Planner |
| Steph Nelson | Planner |

## Monterey Bay Unified Air Pollution Control District (MPUAPCD)

| | |
|---|---|
| Jean Getchell | Supervising Planner |

## U.S. Fish & Wildlife Service (USFWS)

| | |
|---|---|
| Lena Chang | North Coast Division |

## California Department of Parks and Recreation

| | |
|---|---|
| Lucinda Woodward | State Office of Historic Preservation |

## Native American Tribes

| | |
|---|---|
| Edward Ketchum | Amah Mutsun Tribal Band |
| Jean-Marie Feyling | Amah/Mutsun Tribal Band |
| Joseph Mondragon | Amah/Mutsun Tribal Band |
| Melvin Ketchum, III | Amah/Mutsun Tribal Band |
| Pauline Martinez-Arias | Ohlone/Coastanoan-Esselen Nation |
| Ann Marie Sayers | Indian Canyon Mutsun Band of Costanoan |
| Ramona Garlbay | Trina Marine Ruano Family |
| Tony Cerda | Coastanoan Rumsen Carmel Tribe |
| Louise Miranda-Ramirez | Ohlone/Coastanoan-Esselen Nation |
| Valentin Lopez | Amah Mutsun Tribal Band |
| Irene Zwierlein | Amah/Mutsun Tribal Band |
| Christianne Arias | Oholone/Coastanoan-Esselen Nation |

## Other Contacts

| | |
|---|---|
| Richard Simonitch | Creegan and D'Angelo Consulting Engineers |
| David Ramirez | Creegan and D'Angelo Consulting Engineers |

# Chapter 8

# List of Preparers and Bibliography

# CHAPTER 8: LIST OF PREPARERS AND BIBLIOGRAPHY

This report was prepared by PMC, in cooperation with the following agencies, individuals, and consultants:

**Fort Ord Reuse Authority**

James Arnold, Senior Project Manager, FORA

**PMC**

Tad Stearn, Principal
Erika Spencer, Senior Planner
Pamela Lapham, Associate Planner
Ashley Hefner, Assistant Planner
Elaine Flock, Biologist
Angela Calderaro, Biologist

**Creegan and D'Angelo Consulting Engineers**

Richard Simonitch, Senior Vice President
David Ramirez, Staff Engineer

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# Chapter 9

# Document Distribution List

# CHAPTER 9: DOCUMENT DISTRIBUTION LIST

## Federal and State Agencies

California Department of Fish and Game
California Department of Parks and Recreation, Office of Historic Preservation
California Department of Transportation, C District 5
California Regional Water Quality Control Board, Region 3
Fort Ord – Inter-Agency Coordinated Resource Management Planning Group
Governor's Office of Planning and Research (State Clearinghouse)
Presidio of Monterey Directorate of Environmental and Natural Resources
U.S. Army Corps of Engineers
U.S. Department of Defense, Base Realignment and Closure (BRAC)
U.S. EPA, Region IX
U.S. Fish and Wildlife Service

## Regional and Local Agencies

Association of Monterey Bay Area Governments
City of Del Rey Oaks Planning Department
City of Monterey Planning Department
City of Seaside Planning Department
County of Monterey Planning and Building Inspection Department
County of Monterey Public Works Department
Monterey Bay Unified Air Pollution Control District
Monterey County Free Library (Seaside Branch)
Transportation Agency of Monterey County

## Organizations

California Native Plant Society, Local Chapter
Landwatch of Monterey County
Sierra Club, Ventana Chapter

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# Appendices

# Appendix A

# Environmental Checklist

# *ENVIRONMENTAL CHECKLIST*

## *I. BACKGROUND INFORMATION*

| | |
|---|---|
| **Project Name:** | South Boundary/Gigling Road Improvement Project |
| **Project Location:** | The proposed action/project involves improving and realigning the South Boundary Road/General Jim Moore Boulevard Intersection to approximately 300 feet north of the existing intersection and continuing for approximately 600 feet eastward, where the realignment meets up with the existing alignment to continue on for an additional 7,050 linear feet, for a total of approximately 7,593 linear feet (1.44 miles). Realignment would be from a point approximately 300 feet north of the existing South Boundary Road/General Jim Moore Boulevard intersection extending 600 feet eastward, for a total realignment length of 600 linear feet. The existing roadway would be improved from this point to approximately 200 linear feet east of Rancho Saucito. The Gigling Road improvements would occur along the current alignment starting at the intersection with General Jim Moore Boulevard and continuing east for approximately 4,883 linear feet (0.92 miles) to approximately 7th Avenue. (see **Figure 2.1, Regional Location** and **Figure 2.2, Project Vicinity**). |
| **Project Sponsor/ Lead Agency:** | Fort Ord Reuse Authority<br>100 12th Street<br>Marina, CA 93933 |
| **Contact Person:** | James M. Arnold, Senior Project Manager<br>Telephone (831) 883-3672 |
| **Date Prepared:** | May 2010 |
| **Prepared by:** | PMC<br>585 Cannery Row, Suite 304<br>Monterey, CA 93940 |

## *II. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION*

### A. FACTORS

The environmental factors checked below would be potentially affected by this project, as identified within the checklist on the following pages. [Type 'Alt B' to insert a checked box]

| | | |
|---|---|---|
| ■ Aesthetics | ☐ Agriculture Resources | ■ Air Quality |
| ■ Biological Resources | ■ Cultural Resources | ■ Geology/Soils |
| ■ Hazards/Hazardous Materials | ■ Hydrology/Water Quality | ■ Land Use/Planning |
| ☐ Mineral Resources | ■ Noise | ☐ Population/Housing |
| ☐ Public Services | ☐ Recreation | ■ Transportation/Traffic |
| ■ Utilities/Service Systems | | |

Some projects may have little or no potential for adverse environmental impact related to most of the topics in the Environmental Checklist; and/or potential impacts may involve only a few limited subject areas. For the environmental issue areas where there is no potential for significant environmental impact (and not checked above), the following finding can be made using the project description, environmental setting, or other "source" information as supporting evidence.

**FINDING**: For the above referenced topics that are not checked off, there is no potential for significant environmental impact to occur from either construction, operation or maintenance of the proposed project and no further discussion in the Environmental Checklist is necessary.

**All analysis supporting the findings of this checklist are contained in Chapter 5 of the IS/EA.**

**Agricultural Resources:** The project area is not in agricultural production, not zoned for agricultural use or under a Williamson Act contract. In addition, no properties in the vicinity of the project area are under agricultural production. Therefore, the proposed action/project would have no impact on agricultural resources.

**Mineral Resources:** The proposed action/project would not result in the loss of availability of a known mineral resource or the availability of a locally-important resource recovery site delineated on a local General Plan, Specific Plan, or other land use plan.

**Population/Housing:** The *Fort Ord Reuse Plan* evaluated future growth that would occur with redevelopment of the former Fort Ord. In addition, the plan identified that redevelopment of Fort Ord plus growth throughout the remainder of Monterey County and the region would significantly increase the demand placed on the region's transportation infrastructure and services. The proposed action/project was considered as part of the roadway network for the *Fort Ord Reuse Plan* and is included in the *FORA Capitol Improvement Program* to enhance regional access alternatives and enhance the circulation system. For the purposes of environmental review, future development was evaluated in the *Fort Ord Reuse Plan EIR* and no further analysis of population growth is necessary.

The proposed project does not include the removal of housing, which would displace substantial numbers of people.

**Public Services:** The proposed action/project is a transportation improvement project and would not result in the need for new or physically altered government facilities. Implementation of the proposed project is expected to improve response times or other performance objectives for the provision of police and fire protection to neighboring residential areas and schools by decreasing congestion on General Jim Moore Boulevard under future conditions.

**Recreation:** The proposed action/project is a transportation improvement project and would not result in the increased use of existing parks or other recreational facilities, or require the construction of expansion of existing facilities.

## B. DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the proposed project could have a significant effect on the environment there will not be a significant effect in this case because revisions/mitigation strategies in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION (under CEQA) and a FINDING OF NO SIGNIFICANT IMPACT (under NEPA) has been prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

| | |
|---|---|
| Signature | Date |
| Tad Stearn, PMC | Principal |
| Printed Name | Title |

## *III. ENVIRONMENTAL CHECKLIST* [To insert checked box, type 'Alt B']

| **1. AESTHETICS**<br><br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have a substantial adverse effect on a scenic vista? (Source: 11, 12,17, 18,28, 33,35) | ☐ | ☐ | ☐ | ■ |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (Source: 11,12,17,18,28, 29,33,35) | ☐ | ☐ | ☐ | ■ |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? (Source: 11, 12,17, 18, 25,28, 33) | ☐ | ☐ | ■ | ☐ |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Source: 11, 12,17, 18,28, 33,35) | ☐ | ■ | ☐ | ☐ |

Comments: (a-d) The effects of the proposed action/project on aesthetics are addressed within Chapter 4 and 5 within the Environmental Assessment/Initial Study.

## 2. AGRICULTURAL RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Projects; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

| Would the project: | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? (Source: 6,7, 12, 28, 29,35) | ☐ | ☐ | ☐ | ■ |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? (Source: 6,7,12,28,29,35) | ☐ | ☐ | ☐ | ■ |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in public resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? (Source: 12,28,29,35,43) | ☐ | ☐ | ☐ | ■ |
| a) Result in the loss of forest land or conversion of forest land to non-forest use? (Source: 12,28,29,35,43) | ☐ | ☐ | ☐ | ■ |
| e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? (Source: 6,7,12,28,29,35,43) | ☐ | ☐ | ☐ | ■ |

Comments: (a-e) The project area is not in agricultural production or contains forest land; is not zoned for agricultural use or forest land; and is not under a Williamson Act contract. In addition, no properties in the vicinity of the project area are under agricultural production or are considered forest land. Therefore, the proposed action/project would have no impact on agricultural resource of forest lands.

## 3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

| Would the project: | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Conflict with or obstruct implementation of the applicable air quality plan? (Source: 11,18,23,24,25,34) | ☐ | ☐ | ■ | ☐ |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (Source: 11,18, 23,24,25,34) | ☐ | ☐ | ■ | ☐ |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)? (Source: 11,18, 23,24,25,34) | ☐ | ☐ | ■ | ☐ |
| d) Result in significant construction-related air quality impacts? (Source: 11,18, 23,24,34) | ☐ | ■ | ☐ | ☐ |
| e) Expose sensitive receptors to substantial pollutant concentrations? (Source: 11,18, 23,24,22, 34 ) | ☐ | ■ | ☐ | ☐ |
| f) Create objectionable odors affecting a substantial number of people? (Source: 11,18,23,24) | ☐ | ☐ | ☐ | ■ |

Comments: (a-f) Air quality is addressed in Chapters 4 and 5 of the Environmental Assessment/Initial Study.

| **4. BIOLOGICAL RESOURCES**<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (Source:17,18, 32,42 ) | ☐ | ■ | ☐ | ☐ |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? (Source:15,17,18, 32,39,42) | ☐ | ☐ | ■ | ☐ |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (Source:15,17,18, 32,39) | ☐ | ☐ | ☐ | ■ |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (Source:15,17,18, 32,39,42) | ☐ | ■ | ☐ | ☐ |

| 4. BIOLOGICAL RESOURCES<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (Source:17,18, 32, 33, 39, 41 and 42) | ☐ | ■ | ☐ | ☐ |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (Source:17,18, 32, 33, 39, 41 and 42) | ☐ | ☐ | ■ | ☐ |

Comments: (a-f) Biological Resources is addressed within Chapters 4 and 5 of the Environmental Assessment/Initial Study.

| 5. CULTURAL RESOURCES<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5? (Source: 2,11,18,33) | ☐ | ☐ | ☐ | ■ |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5? (Source: 2,11,18,33) | ☐ | ■ | ☐ | ☐ |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Source: 2,11,18,33) | ☐ | ☐ | ☐ | ■ |
| d) Disturb any human remains, including those interred outside of formal cemeteries? (Source: 2,11,18,33) | ☐ | ■ | ☐ | ☐ |

Comments: (a-d) Cultural Resources is addressed within Chapters 4 and 5 of the Environmental Assessment/Initial Study.

| 6. GEOLOGY AND SOILS<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (Source: 5,11,18,31) | ☐ | ☐ | ☐ | ■ |
| ii) Strong seismic ground shaking? (Source: 5,11,18,31) | ☐ | ■ | ☐ | ☐ |
| iii) Seismic-related ground failure, including liquefaction? (Source: 5,11,18,31) | ☐ | ☐ | ■ | ☐ |
| iv) Landslides? (Source: 5,11,18,31) | ☐ | ☐ | ■ | ☐ |
| b) Result in substantial soil erosion or the loss of topsoil? (Source: 11,18,31) | ☐ | ■ | ☐ | ☐ |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? (Source: 11,18,31) | ☐ | ☐ | ■ | ☐ |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (Source: 11,18,31) | ☐ | ☐ | ■ | ☐ |

| 6. GEOLOGY AND SOILS<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? (Source: 11,18,31) | ☐ | ☐ | ☐ | ■ |

Comments: (a-e) Geology and Soils is addressed within Chapters 4 and 5 of the Environmental Assessment/Initial Study.

| 7. GREENHOUSE GAS EMISSIONS<br><br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Source: Appendix C, 34) | ☐ | ☐ | ■ | ☐ |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (Source: Appendix C, 22,34) | ☐ | ☐ | ■ | ☐ |

Comments: Greenhouse Gas Emissions are addressed in Chapters 4 and 5 of the Environmental Assessment/Initial Study.

| 8. HAZARDS AND HAZARDOUS MATERIALS<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Source: 11,12,15,18) | ☐ | ☐ | ■ | ☐ |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (Source: 11,18,12) | ☐ | ☐ | ■ | ☐ |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Source: 11,18,12) | ☐ | ☐ | ■ | ☐ |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (Source: 11,18,12,15,21,38,41) | ☐ | ■ | ☐ | ☐ |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (Source: 11,18,25,26) | ☐ | ☐ | ■ | ☐ |

| 8. HAZARDS AND HAZARDOUS MATERIALS<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (Source: 11,18) | ☐ | ☐ | ■ | ☐ |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (Source: 11,12,17,18) | ☐ | ☐ | ■ | ☐ |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (Source: 11,17,18) | ☐ | ☐ | ☐ | ■ |

Comments: (a-h) Hazards and Hazardous Materials are addressed in Chapters 4 and 5 of the Environmental Assessment/Initial Study.

| 9. HYDROLOGY AND WATER QUALITY<br><br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Violate any water quality standards or waste discharge requirements? (Source: 9,11,17, 18) | ☐ | ■ | ☐ | ☐ |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? (Source: 11,18,17) | ☐ | ☐ | ■<br>Beneficial | ☐ |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site? (Source:,9,10,11, 17,18) | ☐ | ■ | ☐ | ☐ |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site? (Source:,9,10,11,17,18) | ☐ | ☐ | ■ | ☐ |

| 9. HYDROLOGY AND WATER QUALITY<br><br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (Source:9,10,11,17,18) | ☐ | ☐ | ■ | ☐ |
| f) Otherwise substantially degrade water quality? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (Source:11,13,17,18) | ☐ | ☐ | ☐ | ■ |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (Source: 11,13,17, 18) | ☐ | ☐ | ☐ | ■ |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? (Source:11, 13, 17,18) | ☐ | ☐ | ☐ | ■ |
| j) Be at risk by inundation from seiche, tsunami, or mudflow? (Source: 11,13,17,18) | ☐ | ☐ | ☐ | ■ |

Comments: (a-j) Hydrology and Water Quality are addressed in Chapters 4 and 5 of the Environmental Assessment/Initial Study.

| 10. LAND USE AND PLANNING<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Physically divide an established community? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? (Source:11,12,17,18,28,35) | ☐ | ☐ | ■ | ☐ |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? (Source: 11,12,17,18) | ☐ | ☐ | ■ | ☐ |

Comments: (a-c) Land Use and Planning are addressed in Chapters 4 and 5 of the Environmental Assessment/Initial Study.

| 11. MINERAL RESOURCES<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (Source: 11,17,18) | ☐ | ☐ | ☐ | ■ |
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (Source: 11,17,18) | ☐ | ☐ | ☐ | ■ |

Comments: (a-b) The proposed action/project would not result in the loss of availability of a known mineral resource or the availability of a locally-important resource recovery site delineated on a local general plan, specific plan, or other land use plan.

| 12. NOISE<br>Would the project result in: | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Source: 11,18,12,28,35) | ☐ | ■ | ☐ | ☐ |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (Source: 1,11,12, 18,28,35,) | ☐ | ☐ | ■ | ☐ |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (Source: 1,11,12,18,28,35) | ☐ | ☐ | ■ | ☐ |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (Source: 1,11,12,18,28,35) | ☐ | ■ | ☐ | ☐ |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (Source: 1,11,18) | ☐ | ☐ | ■ | ☐ |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |

Comments: (a-f). Noise is addressed in Chapters 4 and 5 of the Environmental Assessment/Initial Study.

| 13. POPULATION AND HOUSING<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (Source: 11, 12,17, 18,35) | ☐ | ☐ | ☐ | ■ |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (Source: 11,12) | ☐ | ☐ | ☐ | ■ |

Comments: (a) The *Fort Ord Reuse Plan* evaluated future growth that would occur with redevelopment of the former Fort Ord. In addition, the plan identified that redevelopment of Fort Ord plus growth throughout the remainder of Monterey County and the region would significantly increase the demand placed on the region's transportation infrastructure and services. The proposed action/project was considered as part of the roadway network for the *Fort Ord Reuse Plan* and is included in the *FORA Capitol Improvement Program* to enhance regional access alternatives and enhance the circulation system. For the purposes of environmental review, future development was evaluated in the *Fort Ord Reuse Plan EIR* and no further analysis of population growth is necessary.

(b,c) The proposed project does not include the removal of housing, which would displace substantial numbers of people.

| 14. PUBLIC SERVICES<br>**Would the project result in:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | |
| a) Fire protection? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |
| b) Police protection? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |
| c) Schools? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |
| d) Parks? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |
| e) Other public facilities? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |

Comments: (a-e) The proposed action/project is a transportation improvement project and would not result in the need for new or physically altered government facilities. Implementation of the proposed project is expected to improve response times or other performance objectives for the provision of police and fire protection to neighboring residential areas and schools by decreasing congestion on General Jim Moore Boulevard under future conditions.

| 15. RECREATION<br>Would the project: | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (Source: 11, 18) | ☐ | ☐ | ☐ | ■ |

Comments: (a,b) The proposed action/project is a transportation improvement project and would not result in the increased use of existing parks or other recreational facilities, or require the construction of expansion of existing facilities.

| 16. TRANSPORTATION/TRAFFIC<br><br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? (Source: 11,18, 16,17,20, 14, 37) | ☐ | ☐ | ■ | ☐ |
| b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads of highways? (Source: 11, 14, 16,17, 18,20, 37) | ☐ | ☐ | ■ | ☐ |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (Source: 11,18,25,26) | ☐ | ☐ | ☐ | ■ |
| **d)** Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (Source: 11,18,20) | ☐ | ☐ | ■ | ☐ |
| e) Result in inadequate emergency access? (Source: 11,17,18) | ☐ | ☐ | ■<br>Beneficial | ☐ |

| 16. TRANSPORTATION/TRAFFIC<br><br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? (Source: 11,18) | ☐ | ■ | ☐ | ☐ |

Comments: Transportation/Traffic is addressed in Chapters 4 and 5 of the Environmental Assessment/Initial Study.

| 17. UTILITIES AND SERVICE SYSTEMS<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (Source: 9,10,11,18,17,) | ☐ | ☐ | ☐ | ■ |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Source: 9,10,11,17,18) | ☐ | ☐ | ☐ | ■ |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Source: 9,10,11,18,17) | ☐ | ☐ | ■ | ☐ |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (Source: 9,10,11,17, 18,) | ☐ | ☐ | ☐ | ■ |
| e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (Source: 9,10,11,17,18) | ☐ | ☐ | ☐ | ■ |

| 17. UTILITIES AND SERVICE SYSTEMS<br>**Would the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? (Source: 11,18) | ☐ | ☐ | ☐ | ■ |

Comments: Utilities and Service Systems is addressed in Chapters 4 and 5 of the Environmental Assessment/Initial Study.

## *IV. MANDATORY FINDINGS OF SIGNIFICANCE*

| **Does the project:** | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? (Source: 2,11,17,18,32,33) | ☐ | ■ | ☐ | ☐ |
| b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? (Source: 1,2,3,11, 17,18, 20, 31,32,33) | ☐ | ☐ | ■ | ☐ |
| c) Have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly? (Source: 1,2, 11, 17,18, 20, 22,31,32, 33,) | ☐ | ■ | ☐ | ☐ |

(a) All potentially significant impacts to plant species, habitat or wildlife species, as well as to potential unknown buried cultural resources, would be reduced to a less than significant level with implementation of the mitigation measures as presented in Chapter 5.

(b) The proposed action/project involves construction of roadway improvements primarily along existing roadway alignments, with the exception of a portion of South Boundary Road that would be realigned. Specific impacts associated with the proposed action/project, including those related to aesthetics, air quality, biological resources, cultural resources, geology and soils, hazardous materials, hydrology and water quality, and noise can be mitigated to a less than significant level and do not represent additional impacts above and beyond the cumulative impacts that were evaluated in the *Fort Ord Reuse Plan*. The proposed action/project would not result in known significant and unavoidable cumulative impacts.

(c) Potential adverse effects on human beings associated with air quality, geology and soils, and noise shall be mitigated through implementation of mitigation measures as presented in Chapter 5.

**Checklist Information Sources**

Refer to Bibliography in the EA/IS