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PLANNING DEPARTMENT
Environmental Assessment (EA) Initial Study (IS)
for

**The General Jim Moore Boulevard and Eucalyptus
Road Improvement Project**

Prepared For:

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March 2005

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SUMMARY AND CONCLUSIONS

Proposed Action/Project

This Environmental Assessment/Initial Study (EA/IS) has been prepared to assess the environmental impacts associated with the widening and associated improvements of approximately 21,900 linear feet of improved roadways, 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 along General Jim Moore Boulevard and Eucalyptus Road on the former Fort Ord. 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 General Jim Moore Boulevard and Eucalyptus Road (hereinafter "proposed action/project"). The purpose of the proposed action/project is to: 1) provide adequate roadway capacity to mitigate future traffic impacts resulting from the buildout of the Fort Ord Reuse Plan; and 2) upgrade the roadways to current safety 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).

General Jim Moore Boulevard

The proposed action/project involves improving and realigning General Jim Moore Boulevard from approximately 1,300 feet north of the Eucalyptus Road/Coe Avenue intersection to 700 feet north of State Highway 218 for a total of approximately 12,800 linear feet. General Jim Moore Boulevard would be realigned from its current location to an alignment east of the existing Pacific Gas and Electric Company (PG&E) easement for high voltage overhead power lines. Realignment would be from a point approximately 900 feet south of the Eucalyptus Road/Coe Avenue intersection to 1,900 feet north of State Highway 218 for a total realignment length of 9,400 linear feet.

General Jim Moore Boulevard will be improved as a four-lane divided arterial roadway with an 18-foot wide center median, reducing to four feet at left turn pockets at proposed intersections, and eight-foot wide shoulders. The proposed roadway will include the construction of new intersections at South Boundary Road; Del Rey Oaks Resort; Broadway Avenue, with an extension of Broadway Avenue to the realigned roadway; Eucalyptus Road/Coe Avenue; Hilby Avenue; and San Pablo

Avenue. The Hilby Avenue and San Pablo Avenue intersections with General Jim Moore Boulevard would be constructed for future use, as connector roads would be necessary prior to operation of these intersections. Improvements along General Jim Moore Boulevard would include construction of curb and gutter and six foot sidewalks of the east side of the roadway. Streetlights will be installed throughout the total length of the roadway improvements in the median and behind the curbs at the proposed intersections. Landscaping and irrigation would be installed within the medians through the length of the roadway alignment.

Eucalyptus Road

The proposed action/project involves improving Eucalyptus Road along its current alignment starting at the intersection with General Jim Moore Boulevard and continuing for approximately 9,100 linear feet east. The roadway would be improved as a two-lane roadway with six-foot wide shoulders/bike lanes on each side of the roadway. Roadway improvements include the installation of curbs and gutters. The proposed action/project includes left and right-turn lanes to General Jim Moore Boulevard at the approach to this intersection.

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*.

Alternative 1 - No Action

Under the No Action Alternative, General Jim Moore Boulevard and Eucalyptus Road would remain in their current condition and alignment. Under this alternative, the project roadways would be subject to increasing congestion as development occurs in accordance with the *Fort Ord Reuse Plan*. By 2008, transportation levels of service (LOS) would degrade to 'E' on most project roadway segments. The No Action Alternative also would not meet the project objective of improving the roadways consistent with the circulation plans of the *Fort Ord Reuse 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.

In summary, the No Action Alternative was rejected because it would result in unacceptable levels of traffic congestion, would not meet the project objective of implementing the governing circulation plans, and would result in the project roadways continuing to not meet minimum roadway safety standards.

Alternative 2 – Revised Project Design

The second alternative to the proposed action/project consists of leaving the existing roadway alignment in its existing configuration, which is currently two lanes on General Jim Moore Boulevard and Eucalyptus Road, but repaving and improving the roadway to current safety standards, installing an 18-foot wide median and eight-foot wide shoulders, installing curb and gutters and an underground percolation system, installing a six-foot wide sidewalk on both sides of the street, and construction of a Class I bike lane on the east side of General Jim Moore Boulevard.

This alternative would provide additional alternative transportation options for residents and commuters within the former Fort Ord with the installation of bike lanes and sidewalks along the proposed roadway alternative. In the short-term, the improved safety, drainage, and alternative transportation improvements would provide an improvement to the overall roadway alignment, however by the year 2008, with the planned redevelopment of the former Fort Ord, the level of service along this roadway would reach unacceptable levels of service, LOS E or worse. In addition, this alternative would not be consistent with the *Fort Ord Reuse*.

In summary, the Revised Project Design Alternative was rejected because it would result in unacceptable levels of traffic congestion, would not meet the project objective of implementing the governing circulation plans, and would result in the project roadways continuing to not meet minimum roadway safety standards.

Alternative 3 – Revised Project Design

The third alternative to the proposed action/project consists of leaving General Jim Moore Boulevard in its existing alignment, which is currently two lanes on General Jim Moore Boulevard and Eucalyptus Road, but repaving and improving it to four lanes as described in the project description. The only difference between the proposed project and this alternative would be that the original alignment would be used rather than moving the roadway to the east as is currently proposed.

This alternative would provide additional vehicular capacity and additional alternative transportation options for residents and commuters within the former Fort Ord with the installation of bike lanes and sidewalks along the proposed roadway alternative. The improved safety, drainage, and alternative transportation improvements would provide an improvement to the overall roadway alignment and would minimize impacts to natural resources by using the existing alignment rather than realigning it. However, the additional noise created by the roadway construction and operation in close proximity to the existing residential areas would likely result in a substantial permanent increase in ambient noise levels at these sensitive receptors that would require the construction of sound walls that would result in a secondary visual impact.

In summary, Alternative #3 was rejected because it would result in a greater range of long-term health and safety impacts.

Alternative 4 – Relocation of Class I Bikeway

Alternative #4 consists of developing the proposed action/project as currently proposed but relocating the Class I bikeway from the currently undeveloped area to the east of the proposed alignment of General Jim Moore Boulevard to the existing alignment of General Jim Moore Boulevard. The existing alignment is currently proposed to serve as an access road to utilities with no plans for demolition.

This alternative would allow for a bike path on the side of the road closest to existing residential development and schools, it would eliminate the need to disturb previously undisturbed soil resulting in less grading, and it would allow for an ongoing use of the abandoned roadway with a specific organization responsible for its upkeep. However, the realignment of the Class I bikeway would result in reduced visibility of the trail from the roadway and subsequently, difficulty in policing and safety. In addition, the alignment associated with this alternative would result in excessive slopes (greater than ten percent) on portions of the bike path and multiple conflicts with cross-streets, which are discouraged by the Transportation Agency for Monterey County and the California Department of Transportation (Caltrans) Design Manual.

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. 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 quality of the project area and create a new source of light, which could increase skyglow and could negatively affect nighttime views in the area. Implementation of mitigation measures incorporated herein would reduce 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. Potential dust generation and the emission of diesel exhaust would be reduced to a less than significant level through the implementation of mitigation measures incorporated herein.

Biological Resources. The proposed action/project would affect native vegetation and trees 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 incorporated herein 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 the potential for erosion and subsequent sedimentation into surrounding sensitive areas. Mitigation measures are prescribed herein to address this issue.

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 would reduce temporary erosion impacts to a less than significant level.

Hazards and Hazardous Materials. The project area is located in an area considered to be 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 munitions of concern and the potential for loss of life or injury due to accidental or purposeful contact with ordnance and 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.

No significant environmental effects are anticipated to agricultural resources, mineral resources, public services, recreation, population and housing, land use and planning, recreation, transportation and circulation, and utilities and service systems.

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

EA / IS Study Requirement

This Environmental Assessment/Initial Study (EA/IS) has been prepared to assess the predicted environmental impacts associated with the General Jim Moore Boulevard and Eucalyptus Road Roadway Improvement project (hereinafter "proposed action/project"). The proposed action/project involves improving and realigning General Jim Moore Boulevard from approximately 1,300 feet north of the Eucalyptus Road/Coe Avenue intersection to 700 feet north of State Highway 218. General Jim Moore Boulevard would be improved as a four-lane divided roadway with an 18-foot median and eight-foot shoulders. The improvements include installation of curb, gutter, a six-foot sidewalk on both sides of the street, and a ten-foot wide Class I bicycle lane that would be constructed on the east side of General Jim Moore Boulevard. Eucalyptus Road would be brought up to current standards as a two-lane road with an 8-foot wide Class II bike lane/shoulder and curb and gutter from General Jim Moore Boulevard to 8,057 feet to the east.

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 the Appendix.

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 is currently owned by the United States Department of the Army and the majority of the right of way would eventually be transferred to the cities of Seaside and Del Rey Oaks 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. **US 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.** National Pollutant Discharge Elimination System (NPDES) General Construction Permit for short-term grading activities on more than one acre.

Purpose and Need for the Proposed Action/Project

The proposed roadway improvements are identified in the *Fort Ord Reuse Plan* (1997) and reflect the planned roadway configurations in the *Fort Ord Reuse Plan*, *Del Rey Oaks General Plan* and the *City of Seaside General Plan*. The proposed action/project is part of a larger series of traffic improvements required to implement the *Fort Ord Reuse Plan*, which were developed to provide an adequate transportation system to serve planned uses on the former Fort Ord 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 2008, and ultimately through 2015. Under existing conditions General Jim Moore Boulevard and Eucalyptus 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.

The proposed recreational bicycle trail along General Jim Moore Boulevard is identified in both the *Fort Ord Reuse Plan* and the *Seaside General Plan* as an important link in an integrated bikeway network encompassing the former Fort Ord, the City of Seaside, and the City of Del Rey Oaks. The purpose of the proposed

bike path is to provide a non-motorized transportation alternative linking the residential areas of Seaside and Del Rey Oaks with the future employment centers located at the former Fort Ord.

CHAPTER 2: DESCRIPTION OF PROPOSED ACTION/PROJECT

Project Background

Fort Ord is a former U.S. Army infantry base located in Monterey County, about five miles northeast of the City of Monterey (see Figure 2.1 – Regional Location and Figure 2.2 – Project Location). The former Army base once had a population of approximately 35,000 military personnel. It covers nearly 28,000 acres of land and is surrounded by the cities of Marina, Monterey, Del Rey Oaks, Seaside, and Sand City, and unincorporated lands in 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 *Fort Ord Reuse Plan* on June 13, 1997. Prior to adopting the *Fort Ord Reuse Plan*, 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*.

General Jim Moore Boulevard

The General Jim Moore Boulevard portion of the proposed action/project is a component of the greater *Fort Ord Reuse Plan* and has been designed in anticipation of additional development. General Jim Moore Boulevard is identified as the major north-south roadway through the southern part of the former Fort Ord in the *Fort Ord Reuse Plan*. It begins at State Highway 218 and progresses northward along the western boundary between Fort Ord and the City of Seaside. An intersection at Broadway provides access to the City of Seaside from General Jim Moore Boulevard and further north there are intersections at Coe Avenue and Light Fighter Drive. Coe Avenue connects General Jim Moore Boulevard with historically residential areas of Fort Ord, school sites, and ultimately the City of Seaside and Highway One. Light Fighter Drive provides access to central Fort Ord, California State University Monterey Bay (CSUMB), and Highway One, where there is a major interchange. General Jim Moore Boulevard terminates at 3rd Street, where it becomes 4th Avenue. The roadway has the potential to operate as a parallel route to State Highway One, providing direct linkage from CSUMB and the City of Marina to the City of Seaside and State Highway 218, and also providing indirect linkage to Highway 68 and the Monterey Peninsula (FORA 1997).

Eucalyptus Road

The Eucalyptus Road portion of the proposed action/project is a component of the greater *Fort Ord Reuse Plan* and has been designed in anticipation of additional

development. Eucalyptus Road is a major connector road from proposed development on Fort Ord to General Jim Moore Boulevard, which is identified as the major north-south roadway through the southern part of the former Fort Ord in the *Fort Ord Reuse Plan*. Eucalyptus Road begins at the General Jim Moore intersection and progresses east/northeast away from the City of Seaside. At the intersection of General Jim Moore Boulevard, Eucalyptus Road meets Coe Avenue, which then heads west and provides access to the City of Seaside and Highway One. The roadway will serve as a feeder road providing access to Parker Flats and other areas allocated for development through the *Fort Ord Reuse Plan*.

Project Elements

These roadway improvements are planned as part of a larger series of transportation improvements required to implement the circulation elements of the *Fort Ord Reuse Plan* and to mitigate the impacts of the development of these plans. Due to funding purposes, Phase I of the improvements along General Jim Moore Boulevard was evaluated separately from the remainder of the improvements proposed south along General Jim Moore Boulevard and along Eucalyptus Road, which are included in this document. Additional environmental review would be required if future improvements are proposed.

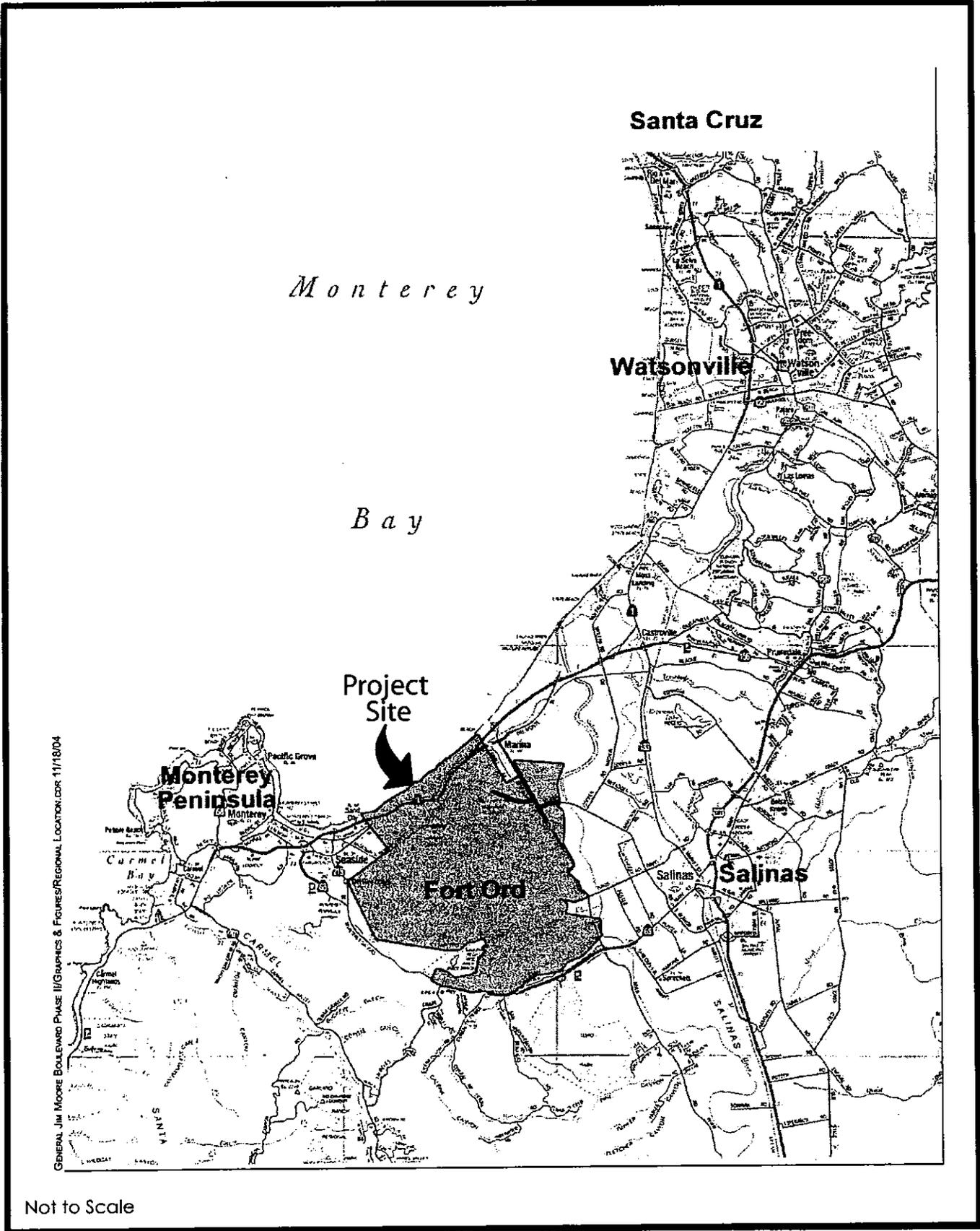
The proposed roadway improvements are intended to implement the *Fort Ord Reuse Plan* transportation network and provide acceptable service levels based on traffic generation estimates for buildout through 2015. The locations of the roadway improvements are shown in Figure 2.2. The following description of the proposed action/project is based on the Preliminary Design Report (PDR) prepared by Creegan and D'Angelo Consulting Engineers in April 2004 and subsequent map modifications, which were prepared based on direction received from FORA staff and supplemented with additional information.

Roadway Improvements

General Jim Moore Boulevard

The proposed action/project involves improving and realigning General Jim Moore Boulevard from approximately 1,300 feet north of the Eucalyptus Road/Coe Avenue intersection to 700 feet north of State Highway 218 for a total of approximately 12,800 linear feet. General Jim Moore Boulevard would be realigned from its current location to an alignment east of the existing Pacific Gas and Electric Company (PG&E) easement for high voltage overhead power lines. Realignment would be from a point approximately 900 feet south of the Eucalyptus Road/Coe Avenue intersection to 1,900 feet north of State Highway 218 for a total realignment length of 9,400 linear feet.

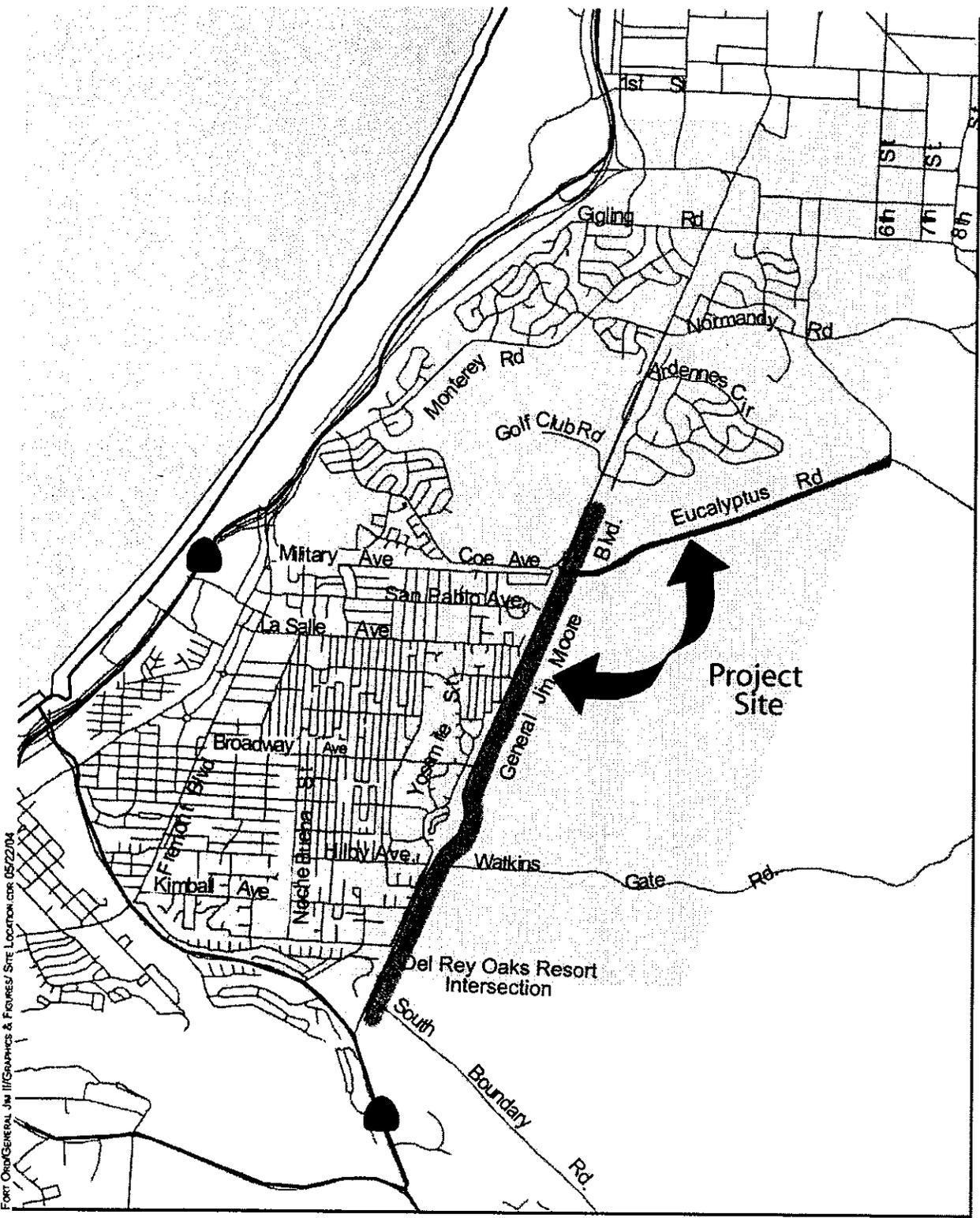
GENERAL JIM MOORE BOULEVARD PHASE II (GRAPHICS & FIGURES)/REGIONAL LOCATION.DWG 11/18/04



Not to Scale

FIGURE 2.1
Regional Location

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FORT ORD/GENERAL JIM I/IGRAPHICS & FIGURES/ SITE LOCATION (05/22/04)

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FIGURE 2.2
Project Vicinity

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General Jim Moore Boulevard will be improved as a four-lane divided arterial roadway with an 18-foot wide center median, reducing to four feet at left turn pockets at proposed intersections, and eight-foot wide shoulders. The proposed roadway will include the construction of new intersections at South Boundary Road; Del Rey Oaks Resort; Broadway Avenue, with an extension of Broadway Avenue to the realigned roadway; Eucalyptus Road/Coe Avenue; Hilby Avenue; and San Pablo Avenue. The Hilby Avenue and San Pablo Avenue intersections with General Jim Moore Boulevard would be constructed for future use, as connector roads would be necessary prior to operation of these intersections. Improvements along General Jim Moore Boulevard would include construction of curb and gutter and six foot sidewalks of the east side of the roadway. Streetlights will be installed throughout the total length of the roadway improvements in the median and behind the curbs at the proposed intersections. Landscaping and irrigation would be installed within the medians through the length of the roadway alignment.

- **South Boundary Road/General Jim Moore Boulevard Intersection.** The intersection of South Boundary Road with General Jim Moore Boulevard would be relocated 300 linear feet to the north of its existing alignment. This realignment and conversion would allow additional space for a right turn lane leading from State Highway 218 to the proposed South Boundary Road intersection with General Jim Moore Boulevard.
- **Del Rey Oaks Resort/General Jim Moore Boulevard Intersection.** Del Rey Oaks Resort is planned for access to future development east of General Jim Moore Boulevard. The roadway would eventually be constructed by the City of Del Rey Oaks as a two-lane roadway with a right and left turn lane on to General Jim Moore Boulevard. Roadway improvements by the City of Del Rey Oaks, could include six-foot wide shoulders/bike lanes on each side of the roadway and the installation of curb and gutter.
- **Hilby Avenue/General Jim Moore Boulevard Intersection.** FORA will construct an intersection on General Jim Moore Boulevard at the Hilby Avenue/General Jim Moore Boulevard intersection. However, due to the realignment of General Jim Moore Boulevard east of its existing alignment, it will be necessary to create a connection to Hilby Avenue by constructing approximately 210 linear feet of roadway between General Jim Moore Boulevard and the existing Hilby Avenue endpoint in the future. This connector road would not be constructed by the City of Seaside at a later date, but is included within the EA/IS for the purpose of environmental review. The roadway would be improved as a two-lane roadway with a right turn lane on to General Jim Moore Boulevard. Roadway improvements include six-foot wide shoulders/bike lanes on each side of the roadway and the installation of curb and gutter.

- **Broadway Avenue/General Jim Moore Boulevard Intersection.** Due to the realignment of General Jim Moore Boulevard, it will be necessary to create a connection to Broadway Avenue by constructing approximately 200 linear feet of roadway between General Jim Moore Boulevard and the existing Broadway Avenue endpoint intersection. The roadway would be improved as a four-lane roadway with a right turn lane on to General Jim Moore Boulevard. Roadway improvements include, six-foot wide shoulders/bike lanes on each side of the roadway and the installation of curb and gutter.
- **San Pablo Avenue/General Jim Moore Boulevard Intersection.** FORA will construct an intersection on General Jim Moore Boulevard at the San Pablo Avenue/General Jim Moore Boulevard intersection. Due to the realignment of General Jim Moore Boulevard, it will be necessary to create a connection to San Pablo Avenue by constructing approximately 200 linear feet of roadway between General Jim Moore Boulevard and the existing San Pablo Avenue endpoint intersection in the future. This connector road would not be constructed by the City of Seaside at a later date, but is included within the EA/IS for the purpose of environmental review. The roadway would be improved as a two-lane roadway with a right turn lane on to General Jim Moore Boulevard. Roadway improvements include six-foot wide shoulders/bike lanes on each side of the roadway and the installation of curb and gutter.
- **Coe Avenue/Eucalyptus Road/General Jim Moore Boulevard Intersection.** The proposed project includes upgrading the Coe Avenue/Eucalyptus Road intersection with General Jim Moore Boulevard. Where Coe Avenue meets General Jim Moore Boulevard, the intersection would be reconfigured to meet with the realigned General Jim Moore Boulevard and provide access to Eucalyptus Road directly across the street from Coe Avenue. Coe Avenue would require approximately 700 linear feet of reconfigured roadway and demolition of the roadway within the old alignment. This intersection would include six-foot wide shoulders/bike lanes on each side of the roadway and the installation of curb and gutter. The closest 200 linear feet of Coe Avenue to the intersection would be improved as a four-lane roadway.

Eucalyptus Road

The proposed action/project involves improving Eucalyptus Road along its current alignment starting at the intersection with General Jim Moore Boulevard and continuing for approximately 9,100 linear feet east. The roadway would be improved as a two-lane arterial roadway with six-foot wide shoulders/bike lanes on each side of the roadway. Roadway improvements include the installation of curbs and gutters. The roadway includes left and right-turn lanes to General Jim Moore Boulevard at the approach to this intersection.

Bicycle and Pedestrian Facilities

The proposed action/project includes sidewalks and bike paths along the length of the proposed roadway alignments. Six-foot wide sidewalks would be constructed on both sides of the General Jim Moore Boulevard and a ten-foot wide Class I bicycle trail would be constructed along the east side of General Jim Moore Boulevard south to South Boundary Road. Along Eucalyptus Road a Class II bike lane is proposed. The bike trails would form an important link in the integrated system of bicycle routes set forth in the *Fort Ord Reuse Plan*.

Transit

Two transit stops would be constructed along the proposed General Jim Moore Boulevard roadway alignment. The transit stops would be located northbound and southbound near the Eucalyptus Road/Coe Avenue Intersection. Both transit stops would include an 80-foot taper, a 50-foot transit stop, and a 140-foot acceleration lane.

Grading

In previously unpaved areas, the proposed action/project would involve vegetation clearing and grading along General Jim Moore Boulevard. Native soil would be removed and replaced with aggregate base prior to paving. Approximately 2,960,000 square feet (69 acres) would be disturbed by the proposed improvements along General Jim Moore Boulevard and Eucalyptus Road with approximately 450,000 cubic yards of cut and 301,000 cubic yards of fill. Along General Jim Moore Boulevard, approximately 2,228,000 square feet (52 acres) would be disturbed by the proposed improvements with grading of 280,000 cubic yards of cut and 246,000 cubic yards of fill. Along Eucalyptus Road, approximately 732,000 square feet (17 acres) would be disturbed by the proposed improvements with grading of 170,000 cubic yards of cut and 55,000 cubic yards of fill. The remaining cut not used as fill for the proposed project would be disposed of at the former Fort Ord in an approved disposal location.

Tree and Vegetation Removal

The proposed action/project along Eucalyptus Road would involve grading and removal of vegetation within 160 feet of the existing edges of the roadway. Approximately 732,000 square feet (17 acres) would be disturbed by the proposed improvements along Eucalyptus Road with grading of 170,000 cubic yards of cut and 55,000 cubic yards of fill. Along General Jim Moore Boulevard, approximately 2,228,000 square feet (52 acres) would be disturbed by the proposed improvements with grading of 280,000 cubic yards of cut and 246,000 cubic yards of fill. As part of disturbance, the proposed action/project would result in the removal of approximately 596 trees greater than six inches diameter at breast height (dbh), including 528 Coast live oak (*Quercus agrifolia*), which are protected trees, five

manzanita (*Arctostaphylos tomentosa* ssp. *tomentosa*), seven Monterey cypress (*Cupressus macrocarpa*), 56 Monterey pine (*Pinus radiata*) trees. In addition, another 18 trees located within fifty feet of the proposed grading limits may be affected by construction activities.

Based on field surveys conducted by Zander Associates, the proposed action/project would result in the removal of approximately an 3.6 acres of intact Coast Live Oak woodland, 42.3 acres of Maritime Chaparrel, 4.3 acres of mature Maritime Chaparrel, and 13.1 acres of degraded Maritime Chaparrel. Additionally, approximately one acre of Sand gilia, 18.1 acres of Monterey spineflower, 0.8 acre of Seaside bird's beak and 62 Coast wallflower plants would be removed for construction of the proposed action/project. For aerial photographs and tree removal estimates, please see Figures 4.4A and 4.4B and Figures 4.5 through 4.11.

Drainage

Drainage from the proposed action/project would be conveyed via curb and gutters along the edges of the proposed roadway to underground percolation systems, which include oil and sediment interceptor tanks, designed to accommodate runoff up to 100-year storm events. The underground percolation system is shown 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 *Fort Ord Reuse Plan and the FORA "In Tract vs. Basewide Policy."* The medians of the proposed roadway improvements would be landscaped and irrigation would be provided where water is available. The proposed landscaping plans would be developed according to the Fort Ord Reuse Authority minimum standards.

Street Lighting

The proposed action/project includes the installation of street lighting along the proposed alignment of General Jim Moore Boulevard south to the South Boundary Road/General Jim Moore Boulevard intersection. The proposed lighting would consist of a combination of double arm electroliers in the median, alternating with single arm poles located behind the curb line. Additional lighting would also be provided at the intersection of South Boundary Road, Broadway Avenue, and the Eucalyptus Road/Coe Avenue Intersections with General Jim Moore Boulevard.

Utilities

The proposed action/project includes the installation of utilities within the proposed roadway alignment. The utilities to be installed include water and recycled water transmission lines, waste water gravity and force main pipelines, gas lines, electric lines, CATV, and communication facilities.

Traffic Signals

Based on meeting warrants for traffic signals, the Cities of Seaside and Del Rey Oaks may install traffic signals at intersections on General Jim Moore Boulevard at a later date.

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CHAPTER 3: ALTERNATIVES CONSIDERED

In addition to the proposed action/project, one alternative was considered, as described below. The following discussion also indicates the relative environmental merits and consequences of the alternative.

Alternative 1 - No Action

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*. By 2008, transportation levels of service (LOS) would degrade to an unacceptable LOS E on most project roadway segments. 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* and the *Seaside 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

The second alternative to the proposed action/project consists of leaving the existing roadway alignment in its existing configuration, which is currently two lanes on General Jim Moore Boulevard and Eucalyptus Road, but repaving and improving the roadway to current safety standards, installing an 18-foot wide median and eight-foot wide shoulders, installing curb and gutters and an underground percolation system, installing a six-foot wide sidewalk on both sides of the street, and construction of a Class I bike lane on the east side of General Jim Moore Boulevard.

This alternative would provide additional alternative transportation options for residents and commuters within the former Fort Ord with the installation of bike lanes and sidewalks along the proposed roadway alternative. In the short-term, the improved safety, drainage, and alternative transportation improvements would provide an improvement to the overall roadway alignment, however by the year 2008, with the planned redevelopment of the former Fort Ord, the level of service along this roadway would reach unacceptable levels of service, LOS E or worse, and

would result in an incremental increase in noise impacts to sensitive receptors due to increased traffic. In addition, this alternative would not be consistent with the *Fort Ord Reuse Plan* and the *Seaside General Plan*.

In summary, the Revised Project Design Alternative was rejected because it would result in unacceptable levels of traffic congestion, would not meet the project objective of implementing the adopted circulation plans, and would result in the project roadways continuing to not meet minimum roadway safety standards.

Alternative 3 – Revised Project Design

The third alternative to the proposed action/project consists of leaving the existing roadway in its existing alignment, which is currently two lanes on General Jim Moore Boulevard and Eucalyptus Road, but repaving and improving it to four lanes as described in the project description. The only difference between the proposed action/project and this alternative would be that the original alignment would be used rather than moving the roadway to the east as currently proposed.

This alternative would provide additional vehicular capacity and additional alternative transportation options for residents and commuters within the former Fort Ord with the installation of bike lanes and sidewalks along the proposed roadway alternative. The improved safety, drainage, and alternative transportation improvements would provide an improvement to the overall roadway alignment and would minimize impacts to natural resources by using the existing alignment rather than realigning it. However, the additional noise created by the roadway being in close proximity to residential areas and sensitive receptors would cause the project to have a potentially significant effect on the closest residences and sensitive receptors to the proposed project.

Alternative 4 – Relocation of Class I Bikeway

The third alternative of the proposed action/project consists of developing the project as currently proposed but relocating the Class I bikeway from currently undisturbed soil on the east side of the proposed alignment to the existing alignment of General Jim Moore Boulevard on the west side of the proposed alignment. The existing alignment is currently proposed to serve as an access road to utilities with no plans for demolition.

This alternative would allow for a bike path on the side of the road closest to existing residential development and schools, it would eliminate the need to disturb previously undisturbed soil resulting in less grading, and it would allow for an ongoing use of the abandoned roadway with a specific organization responsible for its upkeep. However, the realignment of the Class I bikeway would result in excessive slopes (greater than 10 percent) on portions of the bike path and multiple conflicts with cross-streets, which are discouraged by the Transportation Agency for

Monterey County and the Cal-Trans Design Manual. In addition, the use of the abandoned roadway as a bike path would limit visibility from the realigned General Jim Moore Boulevard, leading to security concerns.

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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 and Circulation
- Utilities and Service Systems

Aesthetics

Regulatory Framework

Fort Ord Reuse Plan

The *Fort Ord Reuse Plan* identifies the following policies, to preserve and enhance the aesthetic quality of the former Fort Ord:

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

Recreation Policy G-3 (Seaside, Marina, and Monterey County). 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.

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*, 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 Highway One. There are some points where Eucalyptus 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 *Fort Ord Reuse Plan*.

Site Specific Views

The project area is located along General Jim Moore Boulevard from approximately 1,300 feet north of the Coe Avenue/Eucalyptus Road intersection to 700 feet north of State Highway 218 and along Eucalyptus Road from General Jim Moore Boulevard east for 8,057 feet, for a total of approximately 25,657 linear feet. The General Jim Moore Boulevard portion of the project area is located within an urban area on the edge of development in the City of Seaside and the City of Del Rey Oaks, and is predominately undisturbed along the portions that are proposed for realignment. The Eucalyptus Road portion of the project area extends perpendicular east-northeast from General Jim Moore Boulevard along the existing alignment, which is predominantly disturbed. Photographs of the project area are shown in Figure 4.1 through 4.3. Surrounding land uses along General Jim Moore Boulevard include primarily residential land uses west along the alignment; a middle school to the northwest; and a vacant lot designated Military Enclave located at the corner of Eucalyptus Road and General Jim Moore Boulevard in the northeastern portion of the proposed alignment.

Vegetation along the southern portion of the General Jim Moore Boulevard section of the project area is somewhat dense and consists primarily of native shrubs, trees, and low growing plants. At the northern portion of the General Jim Moore Boulevard section of the project area, the visual setting is comprised of existing development (e.g. residential homes) on the west side of the road and undisturbed land to the east side of the road which includes primarily native grasses, small shrubs, and oaks. Currently, the entire length of Eucalyptus Road is surrounded by relatively undisturbed land that includes fairly dense vegetation consisting of native and non-native grasses, shrubs, and oaks.

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.

Air Quality

Regulatory Framework

Federal

The Federal Clean Air Act (CAA) of 1970 required the Environmental Protection Agency (EPA) to set up National Ambient Air Quality Standards (NAAQS) for several air pollutants on the basis of human health and welfare criteria. The CAA also set deadlines for the attainment of these standards.

The CAA requires states to prepare an air quality control plan, also known as a State Implementation Plan (SIP). California's SIP contains the strategies and control Measures that California will use to attain NAAQS. The CAA of 1990 requires states containing areas that violate the NAAQS to revise their SIPs for conformity with CAA mandates if the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) to address the non-attainment area and may impose additional controls.

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.

The conformity rule is not applicable to the proposed action/project because the Air Basin is no longer a federal non-attainment area. Therefore, no "de minimis" calculations are required for the proposed action/project

State

The California Air Resources Board is the agency with the responsibility for coordinating and oversight of state and local air pollution control programs in California and for implementing the requirements of the California Clean Air Act of 1988 (CCAA).

The CCAA requires that all air districts in the state endeavor to achieve and maintain California Ambient Air Quality Standards (CAAQS) for O₃, CO, SO₂, and NO₂ by the earliest date. Plans for attaining CAAQS specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the CCAA provides districts with new authority to regulate indirect sources. Each district plan is to achieve a five percent annual reduction, averaged

over consecutive three-year periods, in district-wide emissions of each non-attainment pollutants.

Regional

The Monterey Bay Unified Air Pollution Control District (MBUAPCD) is the agency that regulates air quality in the air basin. The MBUAPCD has adopted several plans in an attempt to achieve state and federal air quality standards.

Air Quality Management Plan

The CCAA of 1988 required preparation of an air quality attainment plan showing how the local air quality management districts would meet State and Federal air quality standards. The MBUAPCD adopted the Air Quality Management Plan (AQMP) in 2000. The AQMP for the Monterey Bay Area Region contains the steps that will be taken to attain the state and federal ozone standards.

The CCAA requires plans for moderate non-attainment areas to include "reasonably available transportation control measures sufficient to substantially reduce the rate of an increase of passenger vehicle trips and miles traveled per trip if the district contains an urbanized area with a population of 50,000 or more." The Association of Monterey Bay Area Governments (AMBAG) and the MBUAPCD in consultation with the Transportation Control Advisory Committee identified and examined several transportation control measures for inclusion in the *Metropolitan Transportation Plan*.

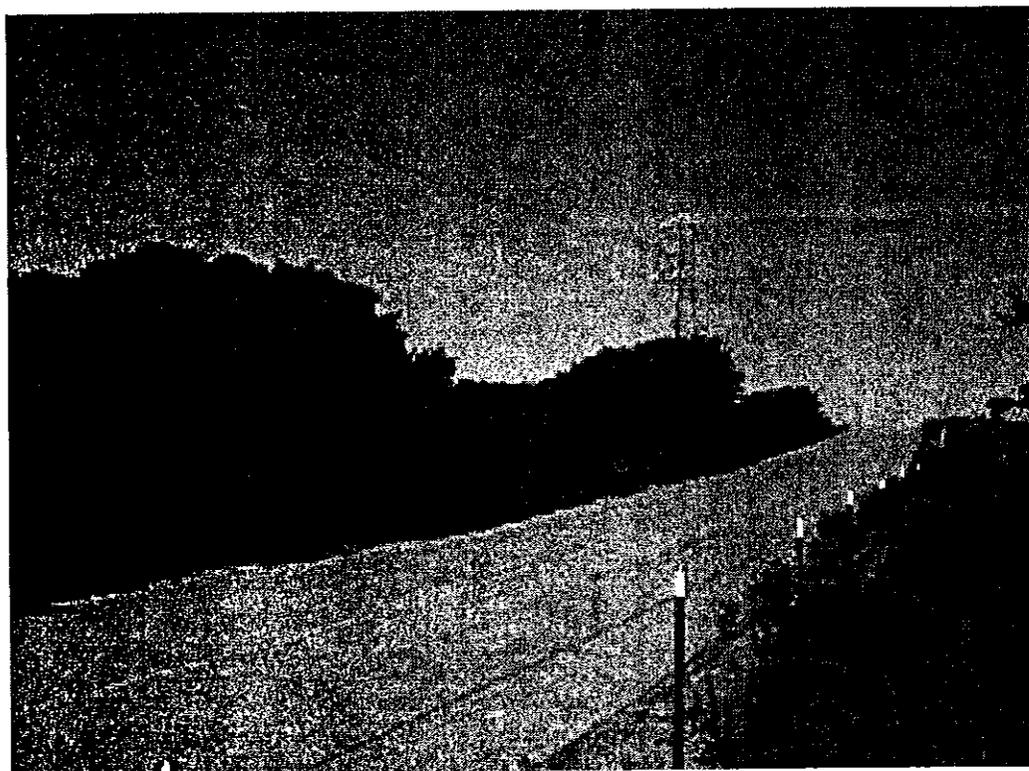
Environmental Setting

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



Eucalyptus Road Looking East



Eucalyptus Road Looking East

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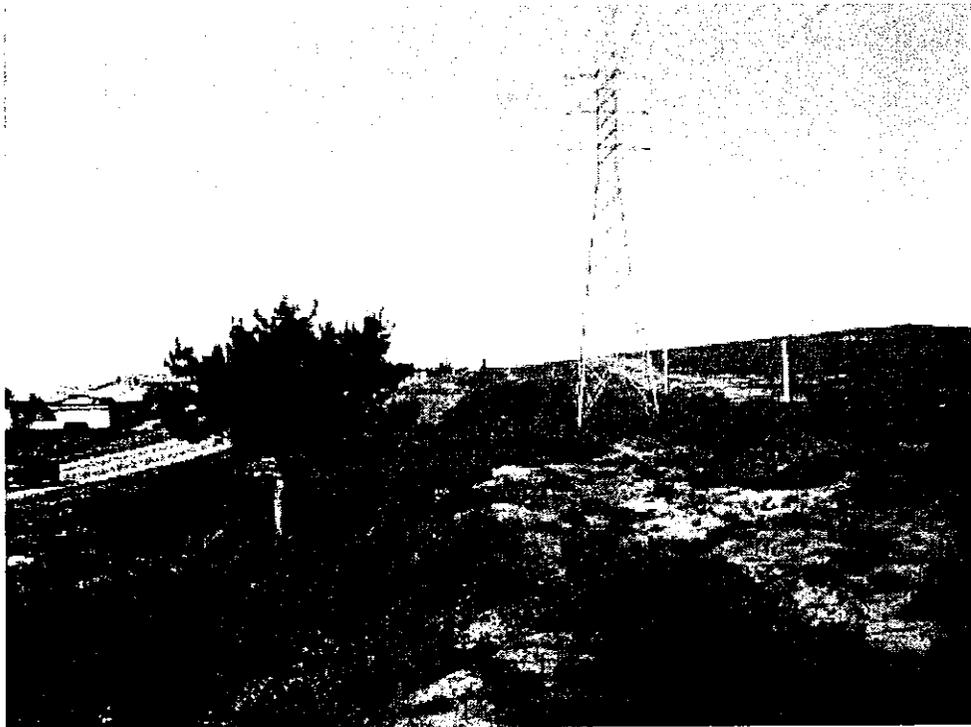


General Jim Moore Boulevard Looking South

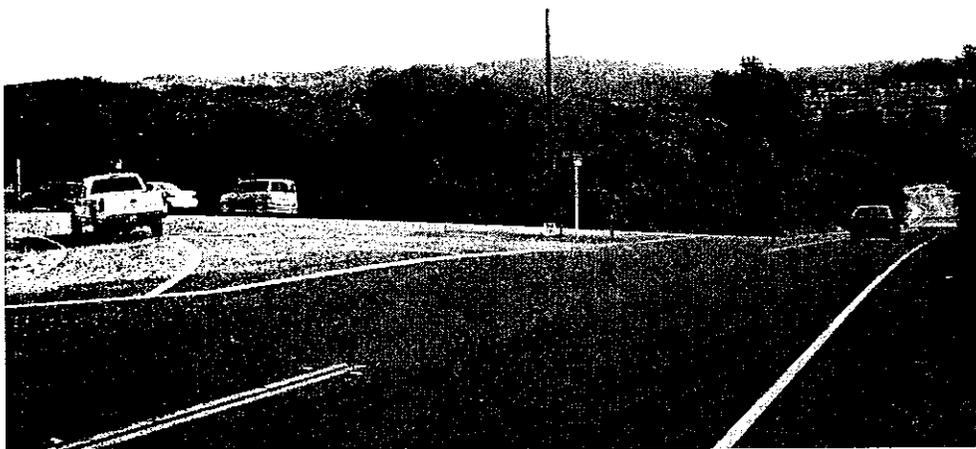


General Jim Moore Boulevard Looking South

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PG&E Transmission Corridor and General Jim Moore Blvd.



Intersection of General Jim Moore Boulevard and South Boundary Road

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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 District 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 indicates both the federal and State ambient air quality standards for criteria air pollutants.

Under the Federal Clean Air Act the NCCAB is designated a maintenance area for the federal one-hour ozone standard. The NCCAB was re-designated from a moderate non-attainment area to a maintenance area in 1997 after meeting the federal one-hour standard in 1990. The NCCAB is designated as an attainment area for the federal eight-hour ozone standard.

**Table 4.1
Federal and State Ambient Air Quality Standards**

Pollutant	AVERAGING TIME	FEDERAL PRIMARY STANDARD	State Standard
Ozone	1-Hour	0.12 PPM*	0.09 PPM
	8-Hour	0.08 PPM	–
Carbon Monoxide	8-Hour	9.0 PPM	9.0 PPM
	1-Hour	35.0 PPM	20.0 PPM
Nitrogen Dioxide	Annual	0.05 PPM	–
	1-Hour	–	0.25
Sulfur Dioxide	Annual	0.03 PPM	–
	24-Hour	0.14 PPM	0.05 PPM
	1-Hour	–	0.5 PPM
PM ₁₀	Annual	50 µg/m ³	30 µg/m ³
	24-Hour	150 µg/m ³	50 µg/m ³
PM _{2.5}	Annual	15 µg/m ³	12 µg/m ³
	24-Hour	65 µg/m ³	–
Lead	30-Day Avg.	–	1.5 µg/m ³
	Month Avg.	1.5 µg/m ³	–

Source: CARB 2004.

*PPM = Parts per Million; µg/m³ = Micrograms per Cubic Meter

Under the California Clean Air Act (CCAA), the basin is a moderate non-attainment area for the State one-hour ozone standard. However, the number of days of violations has declined over the years. In 1987 there were 34 days exceeding the State ozone standard within the basin; in 1996, there were 21; in 1997, there were two; and in 1998 there were 12 exceedances. In 1998, there were six exceedances of the new federal eight-hour ozone standard. None of these exceedances occurred in Monterey County. The air basin is also designated non-attainment for the state PM₁₀ standard.

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.

Biological Resources

Regulatory Framework

Habitat Management Plan

The *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord* (HMP) (April 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 proposed action/project is located within parcels designated as development in the HMP. These parcels have no management restrictions placed upon them and according to the HMP, the biological resources found in these parcels are not considered essential to the long-term preservation of sensitive species at former Fort Ord.

Migratory Bird Treaty Act and California Fish and Game Code

The Migratory Bird Treaty Act (16 USC 703) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, their eggs and /or nests. As used in the act, the term "take" is defined as meaning, "to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires."

The California Fish and Game Code (Section 3511) also provides protection for certain species as listed in the Section. Section 3503.5 of the Fish and Game Code specifically protects the nests and eggs of birds-of-prey and essentially overlaps with the Migratory Bird Treaty Act.

Fort Ord Reuse Plan Policies

The Conservation Element of the *Fort Ord Reuse Plan* contains several policies related to biological resources within the City of Seaside, County of Monterey, and City of Del Rey Oaks. The *Fort Ord Reuse Plan* and these municipality's plans contain parallel policies concerning biological resources within the project area. Policies applicable to the proposed action/project are summarized below:

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

Biological Resources Policy B-1. 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.

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

Biological Resources Policy C-2. The City shall encourage the preservation and enhancement of oak woodland elements in the natural and built environments.

Biological Resources Policy C-3. 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.

Biological Resources Policy D-1. 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.

Biological Resources Policy D-2. 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.

Tree Ordinances

City of Seaside

The proposed action/project is located on the former Fort Ord and the majority of the right of way would eventually be transferred to the City of Seaside. Chapter 8.54 of the City of Seaside Municipal Code provides regulations that control the removal, protection, and preservation of trees within the City. Under Section 8.54.020, trees that are protected by this ordinance include all trees with a circumference of at least 20 inches measured at 24 inches above the ground. Under 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. Section 8.54.080 requires protection of trees during construction activities.

City of Del Rey Oaks

The proposed action/project is located on the former Fort Ord and the southern 2,400 feet of the right of way (1,700 linear feet of which would be improved through this project) would eventually be transferred to the City of Del Rey Oaks. 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 more than thirty (30) inches in circumference as measured two feet above the ground.

County of Monterey

The proposed action/project is located on the former Fort Ord and the eastern portion of Eucalyptus Road would eventually be transferred to the County of

Monterey. Chapter 21.64.260 of Title 21, Zoning Ordinance for the County of Monterey, provides regulations that control the removal, protection, and preservation of trees within the County. The provisions of this Section are applicable throughout the unincorporated area of the County of Monterey outside the Coastal Zone. The proposed project/action is located in the Greater Monterey Peninsula Area Plan in the inland area within the jurisdiction of the Title 21 Zoning Ordinance. Under Section Chapter 21.64.260(C) of title 21, the provisions apply as follows:

21.64.260(C)(4). Oak tree six inches or less in diameter two feet above ground level may be removed in any other area of the County of Monterey designated in the applicable area plan as Resource Conservation, Residential, Commercial or Industrial (except Industrial, Mineral Extraction) without approval of the permit(s) required in Subsection 21.64.260D.

21.64.260(C)(5). No landmark oak tree shall be removed in any area except as may be approved by the Director of Planning and Building Inspection pursuant to Subsection 21.64.260D which states that no person shall do, cause, permit, aid, abet, suffer or furnish equipment or labor to remove, cut down or trim more than one-third of the green foliage of, poison or otherwise kill or destroy any tree as specified in this Section until a tree removal permit for the project has first been obtained. Landmark oak trees are those trees which are 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.

21.64.260(F)(2). Tree removal pursuant to Public Utilities Commission General Order 95 or by governmental agencies within public rights of way is exempt from the provisions of section 21.64.260.

California Native Plant Society (Non Regulatory)

The California Native Plant Society (CNPS) is a statewide non-profit, non-governmental organization with common interest in California's native plants. It has no governmental decision-making authority. CNPS seeks to protect California native flora and to increase awareness in the general population. CNPS Plant Science Programs focus on plant conservation and emphasize data-driven advocacy through gathering and dissemination of science-based information about California plant communities. CNPS programs seek to promote the use of best-available science by public agencies, local jurisdictions and others involved in the land use decision-making process.

Affected Environment

Zander Associates completed site analysis in November 2004 and prepared a biological assessment under contract with Pacific Municipal Consultants, which is

incorporated herein. The report addresses the proposed project/action and provides a description of the affected environment, identifies project effects and recommends mitigation measures, where appropriate.

Habitat Types

Eucalyptus Road is a paved road situated largely within an undeveloped wildland area and the proposed improvements would occur at a maximum of 160 feet from the edge of asphalt on either side of the road. The project area on the north side of Eucalyptus Road consists of relatively intact habitat while the south side of Eucalyptus Road has been disturbed as a result of previous Army training activities. General Jim Moore Boulevard is situated largely within a developed urban area but the majority of the proposed improvements would occur up to 265 feet east of the existing roadway within undeveloped wildland areas.

Zander Associates identified two primary habitat types within the project area: maritime chaparral and coast live oak woodland. The composition of the maritime chaparral varies from relatively degraded habitat to mature stands with a dense cover of tall shrubs interspersed with coast live oak trees. Areas of degraded and mature chaparral are described separately below and the location and extent of each type is delineated on Plate 1, along with coast live oak woodland and the remaining maritime chaparral. See Figures 4.4A and 4.4B for additional information.

Maritime Chaparral

Maritime chaparral is characterized by a wide variety of evergreen, sclerophyllus (hard-leaved) shrubs occurring in moderate to high density on sandy, well-drained substrates within the zone of coastal fog. This community is primarily dominated by shaggy-barked manzanita (*Arctostaphylos tomentosa* ssp. *tomentosa*) with chamise (*Adenostoma fasciculatum*), sandmat manzanita (*Arctostaphylos pumila*), Monterey ceanothus (*Ceanothus cuneatus* var. *rigidus*), and false heather (*Ericameria ericoides*). Coast live oak trees (*Quercus agrifolia*) are interspersed with the shrubs in several sites within the project area. Maritime chaparral is the dominant habitat type in the project area covering approximately 42.3 acres.

Maritime chaparral has the potential to support a diversity of wildlife. The fossorial black legless lizard takes advantage of the loose friable sandy soils found in maritime chaparral for burrowing deep in the sand and leaf litter beneath plants. California horned lizards inhabit the warm, sunny, open sandy areas and patches of loose soil where the lizard can bury itself. The Monterey dusky-footed woodrat can typically be found within the denser chaparral with moderately dense understory growth and abundant dead wood for nest construction. The oak trees present could provide roosting and nesting sites for a variety of birds.

Mature Maritime Chaparral

The mature maritime chaparral consists of the same composition of species but coast live oaks are co-dominant and the shrubs are dense and about 9 feet in height. There are very few breaks in the canopy layer and therefore few opportunities for low-growing shrubs or small annual herbs to establish in the understory. Mature maritime chaparral comprises approximately 4.3 acres of the study area and is located primarily north of Eucalyptus Road. Wildlife expected to use this habitat type are similar to those described above for maritime chaparral.

Degraded Maritime Chaparral

Degraded maritime chaparral describes areas of maritime chaparral that have undergone severe disturbance, resulting in soil compaction, lower densities of chaparral species and an abundance of non-native annuals, such as ripgut brome (*Bromus diandrus*), wild oat (*Avena fatua and barbata*), and filarees (*Erodium sp.*). Degraded maritime chaparral comprises approximately 13 acres and is abundant in the study area south of Eucalyptus Road and west of the existing General Jim Moore Boulevard. The area south of Eucalyptus Road contains numerous unpaved roads and extensive soil compaction and has been disturbed for grading, topsoil removal, and training exercises. The vegetation on the south side has also been cut for unexploded ordnance removal by the Army.

Degraded maritime chaparral may support some of the wildlife species found in intact maritime chaparral, but it provides a lower quality habitat as there is more soil compaction and less cover in the form of an understory with leaf litter and dead wood. There are patches of loose friable sandy soils and an abundance of warm, sunny, open areas that could be inhabited by the fossorial black legless lizard or the California horned lizard.

Coast Live Oak Woodland

There are two stands of coast live oak woodland within the project area; one adjacent to the south side of Eucalyptus Road and the other on the east side of General Jim Moore Boulevard in the southernmost portion of the project area. In both stands, the canopy of coast live oak trees is fairly continuous and the understory has been subjected to varying levels of disturbance from previous Army training activities and ordnance removal. Along Eucalyptus Road, the understory is comprised of poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), few shaggy-barked manzanita, and numerous non-native herbs and grasses. Where there has been disturbance, the understory has been heavily invaded by non-native herbs and grasses. Additionally, in preparation for ordnance removal, the Army has cut the understory and has limbed the oak trees up to about 10 feet from ground level.

The oak woodland next to General Jim Moore Boulevard has an understory comprised of maritime chaparral species such as shaggy-barked manzanita, sandmat manzanita (*Arctostaphylos pumila*), monkeyflower (*Mimulus aurantiacus*), coffeeberry (*Rhamnus californica*) and mock heather (*Ericameria ericoides*). Monterey spineflower (*Chorizanthe pungens* var. *pungens*) can be found within disturbed openings in the understory. Areas of thicker canopy have poison oak, California blackberry and numerous non-native herbs and grasses as components of the understory.

Coast live oak woodland comprises 3.6 acres of the total study area. Along Eucalyptus Road Coast live oak woodland is not extensive, but it is contiguous with a larger intact oak woodland to the south that provides valuable habitat for a variety of wildlife species. Oak trees serve as nesting sites and provide cover for many birds and mammals, including the Monterey dusky footed woodrat. Acorns are a good food source for several animal species, including the California quail, western gray squirrel and black-tailed deer. Other representative animal species of oak dominated forests include arboreal salamander, western screech owl, scrub jay, and Virginia opossum. Red-tailed hawks and other raptors may use the scattered trees around the woodland edges as perching and scanning points and other bird species may nest in these trees.

Trees

On October 12, 2004, Kevin Grant, a certified Arborist with Pacific Municipal Consultants conducted a site visit within the project area to identify and prepare an inventory of any single-trunked native tree six inches diameter breast height (DBH) and larger, or multi-trunked native tree having an aggregate diameter of ten-inches DBH and larger, as well as any significant trees 19 inches DBH and larger. The trees were identified and tagged in the field. Trees within the project area are shown in aerial photographs as shown in Figures 4.5 through 4.11.

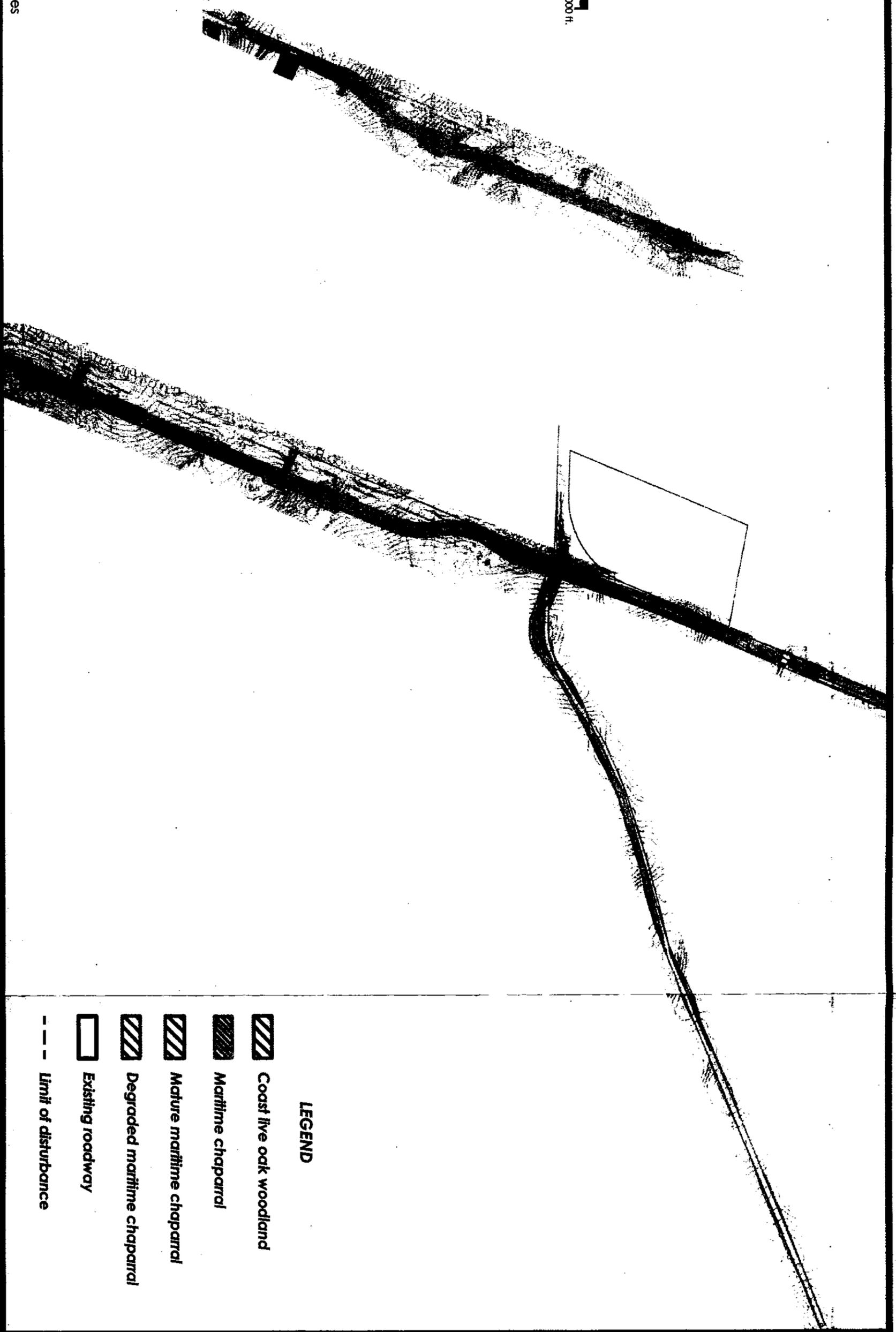
The project area contains approximately 642 trees and consists of an "urban forest" with primarily Coast Live Oak (*Quercus agrifolia*), Hookers manzanita (*Arctostaphylos hookerii*), Monterey pine (*Pinus radiata*), and Monterey cypress (*Cupressus macrocarpa*) trees. The multi-aged evergreen trees reflect the transition of the residential neighborhood adjacent to the Fort Ord target range. The condition of the oldest trees reflects the negative impacts of decades of transitioning. The youngest trees are primarily located in the understory of the Coast Live Oak woodland.

Special Status Species

Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS); those listed or proposed for listing as rare, threatened, or endangered by the California Department of Fish and Game (CDFG); plants



SCALE
0
1000 ft.



LEGEND

-  Coast live oak woodland
-  Maritime chaparral
-  Mature maritime chaparral
-  Degraded maritime chaparral
-  Existing roadway
-  Limit of disturbance

Source: Zander Associates

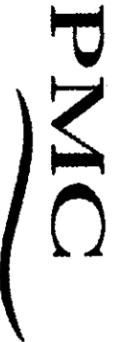
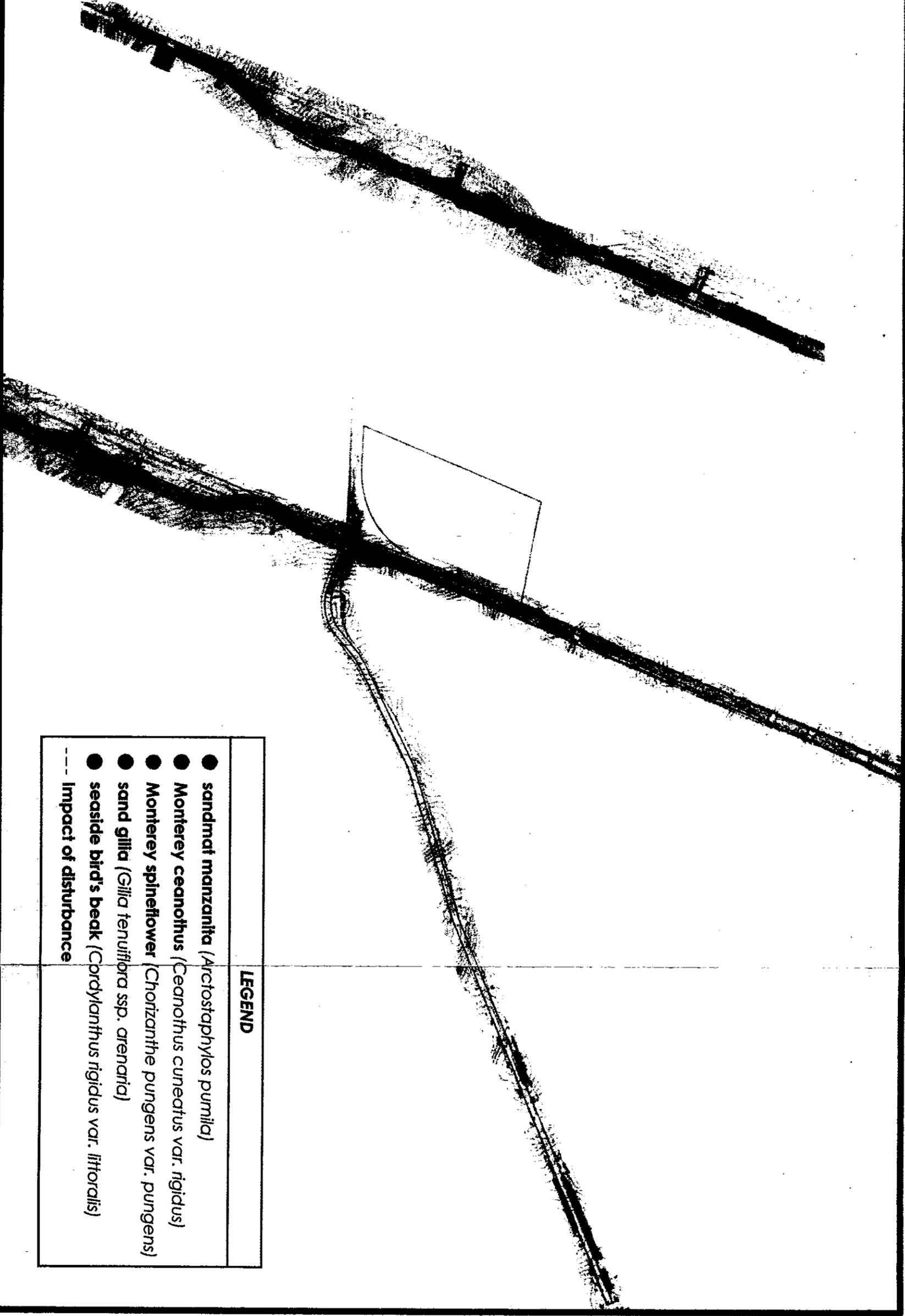
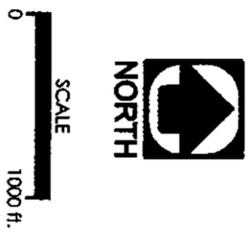


FIGURE 4.4A
Habitat Type



LEGEND	
●	sandmat manzanita (<i>Arctostaphylos pumila</i>)
●	Monterey ceanothus (<i>Ceanothus cuneatus</i> var. <i>rigidus</i>)
●	Monterey spinnelower (<i>Chorizanthe pungens</i> var. <i>pungens</i>)
●	sand gilia (<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>)
●	seaside bird's beak (<i>Cordylanthus rigidus</i> var. <i>littoralis</i>)
---	Impact of disturbance

Source: Zander Associates



FIGURE 4.4B
Special Status Plants



Source: PMC and U.S. Army

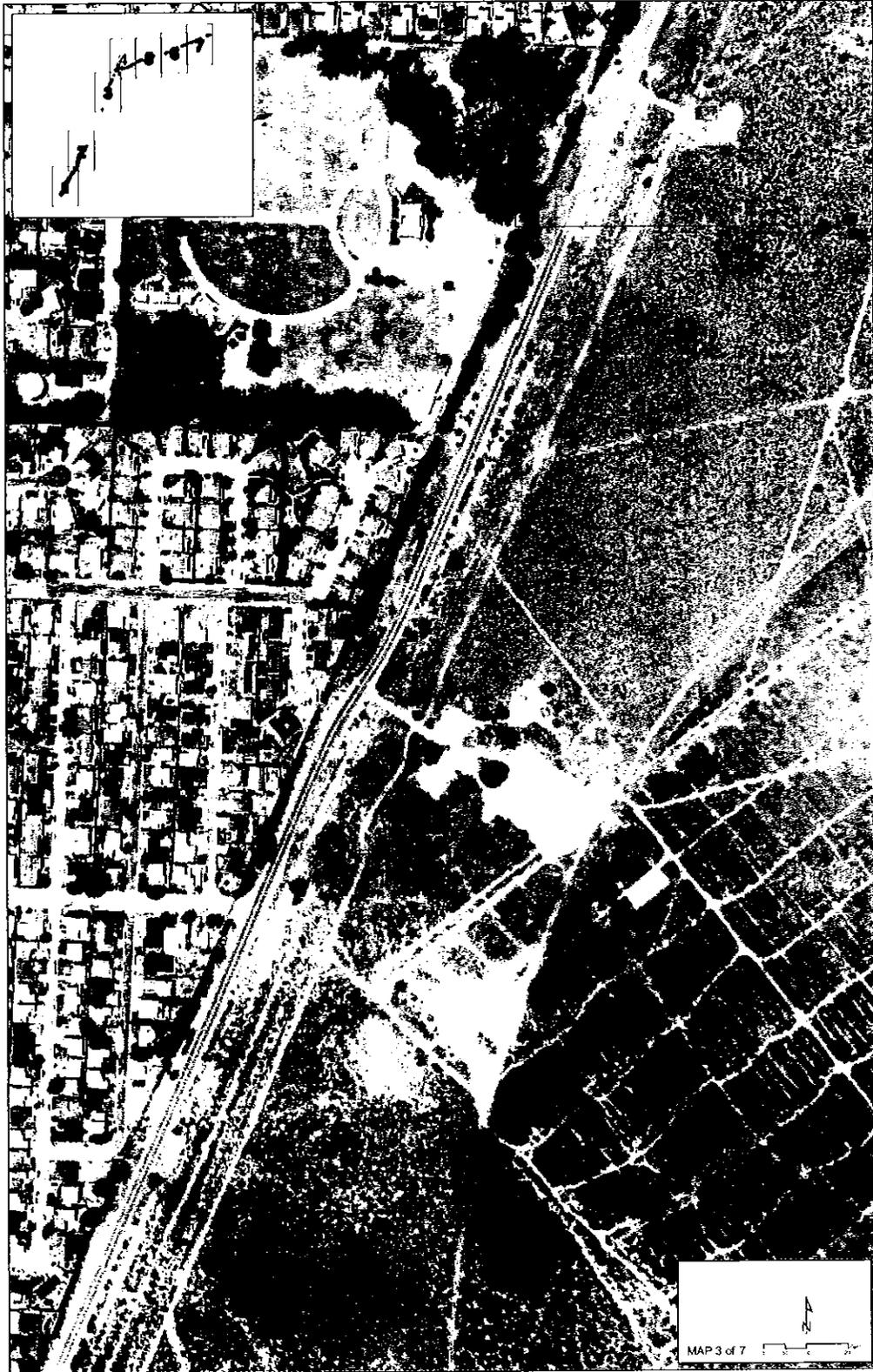
FIGURE 4.5
AERIAL PHOTO 1 AND PROPOSED TREE REMOVAL



Source: PMC and U.S. Army



FIGURE 4.6
AERIAL PHOTO 2 AND PROPOSED TREE REMOVAL



Source: PMC and U.S. Army

FIGURE 4.7
AERIAL PHOTO 3 AND PROPOSED TREE REMOVAL



Source: PMC and U.S. Army



FIGURE 4.8
AERIAL PHOTO 4 AND PROPOSED TREE REMOVAL



Source: PMC and U.S. Army



Source: PMC and U.S. Army



FIGURE 4.10
AERIAL PHOTO 6 AND PROPOSED TREE REMOVAL



Source: PMC and U.S. Army



FIGURE 4.11
AERIAL PHOTO 7 AND PROPOSED TREE REMOVAL

occurring on lists 1B or 2 of the California Native Plant Society's *Inventory of Rare and Endangered Plants of California, Sixth Edition* (2001); animals designated as "Species of Special Concern" (CSC) by the CDFG; and all HMP species. The *Flora and Fauna Baseline Study of Fort Ord, California* (U.S. Army Corps of Engineers 1992) documented eight special status plants and ten special status animals as occurring or potentially occurring within the Eucalyptus Road project area. Additionally, in its recent evaluation of actions that may affect California tiger salamander on the former Fort Ord, the Army includes a portion of the project area within potential upland habitat for the salamander. Directed surveys for special status plants were conducted in the study area for the biological assessment prepared by Zander Associates. No surveys for special status animals were conducted but the habitat was evaluated for the potential to support these species.

Special Status Plants

The eight special status plant species documented in the flora and fauna baseline study as occurring within or adjacent to the General Jim Moore Boulevard project area are Sand gilia (*Gilia tenuiflora ssp. arenaria*), Monterey spineflower (*Chorizanthe pungens var. pungens*), Seaside bird's beak (*Cordylanthus rigidus var. littoralis*), sandmat manzanita, Eastwood's ericameria, wedge-leaved horkelia (*Horkelia cuneata ssp. sericea*), Coast wallflower (*Erysimum ammophilum*) and Monterey ceanothus. Of these eight species, six were identified within the study area - sand gilia, Monterey spineflower, seaside bird's beak, sandmat manzanita, coast wallflower, and Monterey ceanothus. The following is a discussion of each of the species observed within the study area by Zander Associates.

Sand gilia. Sand gilia (*Gilia tenuiflora ssp. arenaria*) is a state-listed threatened species and a federally listed endangered species. It is a small annual herb that occurs on sandy soils in openings in coastal dunes and scrub and in maritime chaparral. Zander Associates found this species throughout the project area. Along Eucalyptus Road there are about 580 Sand gilia plants occupying approximately 0.03 acre. These plants all occur within less mature maritime chaparral on the north side of Eucalyptus Road with the exception of one plant that was found on the edge of coast live oak woodland on the south side of Eucalyptus Road. Along General Jim Moore Boulevard there are about 730 Sand gilia plants occupying approximately 0.97 acre. These plants are all found within maritime chaparral on the east side of the existing General Jim Moore Boulevard alignment, with the most dense occurrences in the area beginning just south of Broadway Avenue and extending to just north of San Pablo Avenue.

Sand gilia is an annual plant and therefore the size and location of the population can fluctuate from year to year. Based on the 2004 surveys conducted by Zander Associates, there were about 1,310 Sand gilia occupying approximately one acre within the study area.

Monterey spineflower. Monterey spineflower (*Chorizanthe pungens* var. *pungens*) is a federally listed threatened species. It occurs on sandy soils within coastal dune, coastal scrub, maritime chaparral, grassland, and other plant communities. Zander Associates found Monterey spineflower throughout the study area in maritime chaparral within vegetation clearings or in areas of intermittent disturbance, such as around electrical towers and on the edges of an unpaved trail. Zander Associates mapped the extent of Monterey spineflower occurrences and estimated densities within each polygon as follows; less than five percent cover is low density, greater than five percent but less than twenty-five percent is medium density, and greater than twenty-five percent cover is high density. Monterey spineflower is an annual plant and therefore the size and location of the population can fluctuate from year to year. Based on the 2004 surveys conducted by Zander Associates, Monterey spineflower occupied approximately 18.2 acres within the project area; 4.9 acres of low density, 3.5 acres of medium density and 9.8 acres of high density.

In its designation of critical habitat for Monterey spineflower (Federal Register May 29, 2002), the U.S. Fish and Wildlife Service (USFWS) excluded areas designated as development in the HMP for Fort Ord. The portions of Eucalyptus Road and General Jim Moore Boulevard that are the focus of this project lie within HMP-designated development areas. Consequently, the project area is not located within designated critical habitat for Monterey spineflower.

Seaside bird's beak. Seaside bird's beak (*Cordylanthus rigidus* var. *littoralis*) is a state-listed threatened species. It is an annual herb that is hemiparasitic, acting as a parasite by attaching its roots to a host plant while producing some of its own chlorophyll. It flowers in the summer and is insect pollinated to produce small seeds that are dropped or shaken by wind from their capsule. This species is found in sandy soils of stabilized dunes, maritime chaparral, and coastal scrub habitats at the former Fort Ord.

No directed surveys for Seaside bird's beak were conducted in the project area in 2004. However, based on information from the Army and previous surveys conducted by Zander Associates in 2001 and 2003, several plants are known to occur adjacent to the roadway near the intersection of General Jim Moore Boulevard and South Boundary Road. The extent of this occupied habitat was estimated based on previous surveys conducted in 2003 and is approximately 0.8 acre.

Sandmat manzanita. Sandmat manzanita (*Arctostaphylos pumila*) is a low-statured perennial shrub that is considered rare, threatened, or endangered in California by the California Native Plant Society (CNPS List 1B). This species has no state or federal status, but it is an HMP species. It typically occurs in sandy soils within chaparral or woodland plant communities. Zander Associates found sandmat manzanita to be a primary component of the maritime chaparral throughout the project area and therefore did not map specific occurrences.

Coast wallflower. Coast wallflower (*Erysimum amophilum*) is an annual or biennial herb that flowers in spring. It is considered rare, threatened, or endangered in California by the California Native Plant Society (CNPS List 1B) and it is an HMP species. Coast wallflower is insect pollinated, likely by bees and butterflies, and produces seed that is dropped or shaken by wind from the fruit. The species tends to colonize stabilized open sandy areas and is found in the coastal dunes of Monterey Bay and Santa Rosa Island (San Diego County), and in the coastal scrub on the former Fort Ord. Populations are subject to fluctuation in numbers and location in any given year. Two patches of coast wallflower were found within the project area on the east side of General Jim Moore Boulevard. The patches of 12 and 50 individuals occur within 450 feet of each other within intact maritime chaparral habitat.

Monterey ceanothus. Monterey ceanothus (*Ceanothus rigidus*) is considered rare, threatened, or endangered in California by the California Native Plant Society (CNPS List 1B) and it is an HMP species. It is an evergreen shrub that occurs on sandy hills and flats, and is common throughout the maritime chaparral habitat on the former Fort Ord. Monterey ceanothus is a primary component of the maritime chaparral habitat in the project area and therefore the locations of individual plants were not mapped.

Special Status Animals

The ten special status animal species identified in the flora and fauna baseline study as potentially occurring within the project area include; black legless lizard, coast horned lizard, Monterey dusky footed woodrat, Monterey ornate shrew, loggerhead shrike, horned lark, northern harrier, burrowing owl, golden eagle, and prairie falcon. The Army recently identified potential upland habitat for California tiger salamander in the southern portion of the project area along General Jim Moore Boulevard, south of Broadway Avenue.

California tiger salamander. The Central California population of California tiger salamander (CTS) (*Ambystoma californiense*) was listed as threatened by the U.S. Fish and Wildlife Service on August 4, 2004. The animal is also a California Species of Special Concern (CSC) species and an HMP species. 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 (± 1 km) 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 4 to 5 years to reach sexual maturity, during which time they are using upland habitat, 95-99 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.

There is no suitable breeding habitat for CTS within the project area but the Army identified potential breeding habitat for CTS within .62 mile of the site at the Frogpond Natural Area owned by the Monterey Peninsula Regional Park District. In its evaluation of Army actions that may affect CTS, the Army identified lands within a 1.24 mile radius of known and potential breeding habitat for CTS as potential upland habitat for the species. In this evaluation, lands within the project area, primarily south of Broadway Road, are identified by the Army as potential upland habitat for CTS.

California black legless lizard. The California black legless lizard (*Aniella pulchra nigra*) is a CSC species and an HMP species. 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 various maritime chaparral habitats and coast live oak woodland are potential habitat for black legless lizard and some sites within the urban/ruderal areas, where the soils are less compacted, could be suitable for this species.

California horned lizard. The California horned lizard (*Phrynosoma coronatum frontale*) is lizard is also a CSC species but is not an HMP species. California horned lizards inhabit open country, especially sandy areas, washes, flood plains, and wind-blown deposits in a wide variety of habitats, including shrublands, woodlands, riparian habitats and annual grassland. Warm, sunny, open areas are a main habitat requirement, along with patches of loose soil where the lizard can bury itself. The California horned lizard is known to occur in many habitat types on former Fort Ord, and it may be present in the project area where the soils are not compacted and where there are remnants of native vegetation.

Monterey dusky-footed woodrat. The Monterey dusky-footed woodrat (*Neotoma fuscipes luciana*) is a California Species of Special Concern (CSC). It is restricted to western and central Monterey County and northwestern San Luis Obispo County. This subspecies is typically found within dense chaparral or oak woodland habitats with moderately dense understory growth and abundant dead wood for nest

construction. The coast live oak woodland and mature maritime chaparral could provide habitat for Monterey dusky-footed woodrat.

Monterey ornate shrew. Monterey ornate shrew (*Sorex ornatus salerius*) is a CSC species and an HMP species. It occupies a variety of mostly moist riparian woodland habitats. Little is known about this species, since it is difficult to locate and does not survive well in traps due to very high metabolic rates. Shrews are often short-lived (less than a year), and several generations may occur in a single year. There are no riparian areas in the project area and the coast live oak woodlands are relatively dry reducing the likelihood that shrews are present.

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. The northern harrier (*Circus cyaneus*) also nests on the ground in marsh vegetation or tall dense grass. All of these are CSC species and their nesting habitat is of primary concern. No evidence of horned lark or northern harrier nests or burrowing owl activity was observed in the project area during our surveys and these species are not expected to nest in the vicinity due to the amount of ground and vegetation disturbance.

Loggerhead shrike. The loggerhead shrike (*Lanius ludovicianus*) is a CSC species that prefers open woodland habitats with scattered trees, shrubs, posts, fences, or other perches. Nests are usually built in trees and shrubs; however, structures such as telephone poles and abandoned buildings are also used. This species could utilize the coast live oak woodland habitat in the project area.

Golden eagle. The golden eagle (*Aquila chrysaetos*) is a CSC species and is also provided protection under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (16 USC 668). Nests are usually constructed on cliffs or in large trees in open areas and eagles are relatively site-faithful, often reusing old nests. No active golden eagle nests are known to occur in the vicinity of the project area and due to the amount of disturbance, golden eagles are not expected to nest in or nearby the project area.

Prairie falcon. The prairie falcon (*Falco mexicanus*) is a CSC species and its nesting habitat is of primary concern. Prairie falcons are scarce and local residents of open and dry interior country of southern and eastern Monterey County. They nest on cliffs, in rock fissures or crevices and forage in grasslands and oak savanna habitats. There is no suitable nesting habitat for the prairie falcon 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 ordnance clearing, etc., it is unlikely that bats would roost in or nearby the project area.

Cultural Resources

Regulatory Framework

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.

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 Highway One.

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.

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.

Soils Characteristics

The project site 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 Baywood sand, with slopes of up to fifteen percent. The Baywood series consists of somewhat excessively drained soils that formed in stabilized sand dunes with slopes varying from two to fifteen percent. Permeability of this soil is rapid and the available water holding capacity is 2.5 to three inches. The Baywood soil series has slow to moderate runoff with an erosion hazard of slight to moderate.

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

Soil Profile

Soil sampling was conducted by Pacific Crest Engineering in 2004 to characterize the soil profile within the project area. Twenty six-inch diameter soil borings were drilled within the project area on January 23 and February 6, 2004 by Pacific Crest Engineering, Inc. using hydraulically operated continuous test augers. The soil samples were tested for the following: moisture density relationship in accordance with ASTM test D2937; "R" value tests in accordance with California test 301; and gradation tests in accordance with ASTM test D1140.

The borings encountered existing pavement sections consistent of Asphaltic Concrete overlying Aggregate Base. The roadway section encountered along General Jim Moore Boulevard varied from approximately two to seven inches of

Asphaltic concrete over two to eleven inches of Aggregate Base. Based on the soil borings at the project site, the soil underlying the roadway is composed of fine to medium grained sand with varying amounts of silt, which was found to be damp to moist and loose to very dense. No free groundwater was encountered within any of the borings to the maximum depth drilled of 26.5 feet.

Shrink Swell Potential

Shrink swell potential refers to the change in the volume of soil material that 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 the soil engineering report prepared for the proposed action/project by Pacific Crest Engineering and the *Monterey County Soil Survey*, the Baywood soil series has a low shrink swell potential.

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 the geotechnical report prepared by Pacific Crest Engineering and the *Soil Survey of Monterey County*, soils at the project site are classified as highly erodible.

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. Three active fault zones are located in the project vicinity including: the San Andreas fault zone located 17 miles northeast, the Palo Colorado—San Gregorio fault located 16 miles southwest, and the Monterey Bay fault zone located directly offshore. The maximum credible earthquake magnitude is greater than 6.0 for the Monterey Bay fault zone, greater than 7.0 for the Palo-Colorado-San Gregorio fault, and greater than 8.0 for the San Andreas fault.

The King City fault, which is part of the San Andreas Fault system, is a major structural feature of the northern Salinas Valley, and has been interpreted to project northwesterly through or near the northeast boundary of Fort Ord. The King City fault is located approximately five miles from the project area.

Severe ground shaking from a major earthquake in the project area could cause densification of native sand deposits at the project site. Seismically induced settlement of the ground surface from densification of native sands is likely to be

somewhat random due to the nature of the sand deposits. Since groundwater was not found at the project site from the borings conducted by Pacific Crest Engineering, seismically induced densification of near-surface soils is not likely to result in soil liquefaction.

Topography

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

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 ordnance and explosives, including unexploded ordnance (FORA 1997).

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 had been used for ordnance training.

The Department of Defense Ammunition and Explosive Safety Standard (DoD 6055.9 - Standard) states that real property that is known to be contaminated with ammunition, explosives or chemical agents must be decontaminated with the most appropriate technology to assure the protection of the public consistent with the proposed end use of the property. This standard is incorporated into the Army Regulations 385-64 (U.S. Army Explosives Safety Program).

In 1993 an archival investigation was conducted to locate areas where Munitions and Explosive of Concern (MEC) may have been used. Additional archive searches, follow-on interviews and visual inspections conducted since 1993 indicate that approximately 12,000 acres are known or suspected to contain MEC. Twenty-nine Munitions Response (MR) sites are 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. To date

approximately 3,000 acres have been investigated and/or received response actions designed to minimize the explosive safety risk to the public. 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). These documents received thorough regulatory and public review (U.S. Army 2004). See Figure 4.5 for locations of known MEC's within the project area.

Multi-Range Area

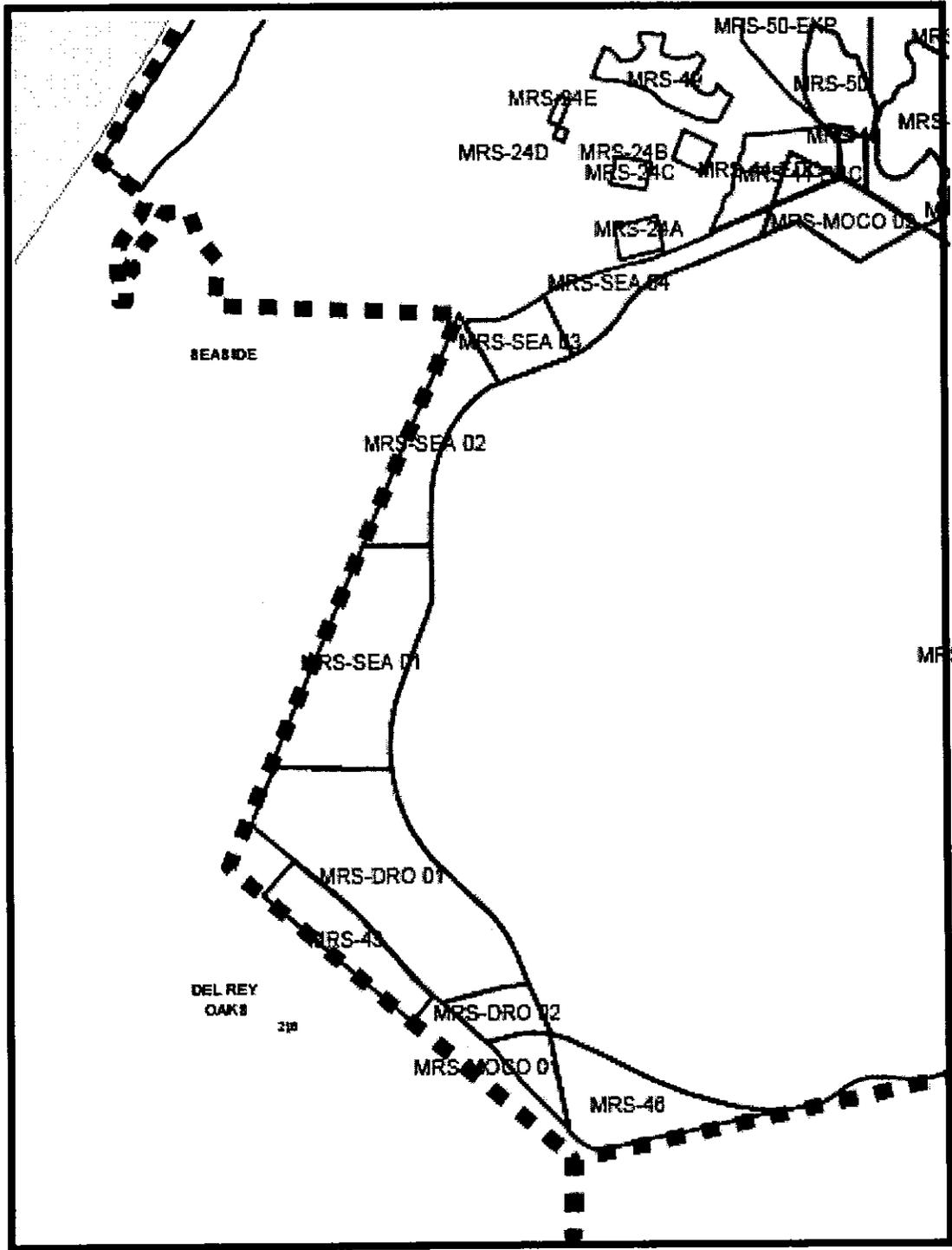
The Multi-Range Area (MRA) occupies approximately 8,000 acres located in the southwestern portion of the former Fort Ord. The MRA is bounded by Eucalyptus Road to the north, Barloy Canyon Road to the east, South Boundary Road to the south, and General Jim Moore Road to the west.

The MRA was reportedly used since the opening of the base for ordnance 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 ordnance were used during training activities at the various ranges within the MRA.

The ordnance 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 entire corridor of the proposed General Jim Moore realignment and the lands south of Eucalyptus Road are in the MRA which means there are potential MEC's located throughout the project area. Lands within the Munitions Response Areas 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.

The munitions sampling effort of these sites were accomplished by CMS Environmental Inc. between June 1996 and February 1997. The additional sampling effort was accomplished by USA Environmental, Inc. between May 2000 and August 2000. Site characterization activities that have been conducted at suspected small-arms and multi-use training ranges throughout the Former Fort Ord, including the MRA, are described in the Comprehensive BRA Report (Shaw and MACTEC, 2004). The sampling of the sites found munitions and explosives of concern and a quantity of small arms.



6,750 3,375 0 feet



1,700 850 0 meters



Map Units: NAD 1983 StatePlane California Zone IV (US Feet)

- Munitions Response Sites
- Fort Ord Boundary

Source: United States Army Corp of Engineers and PIE – People Information Earth

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Airport Hazards

The proposed action/project is located approximately one to 2.5 miles northwest of the Monterey Peninsula Airport and 6 miles south of the Marina Municipal Airport. There are no private airports within the vicinity of the project area.

Emergency Response Plan

According to the *Fort Ord Reuse Plan*, General Jim Moore Boulevard is identified as an emergency evacuation route.

Hydrology and Water Quality

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).

Central Coast Regional Water Quality Control Board (CCWQCB)

NPDES Construction Permit

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.

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 roadway does not contain curbs and gutters and storm water-related improvements.

Land Use and Planning

Environmental Setting

The project area is located on the former Fort Ord. General Jim Moore Boulevard is located in the Cities of Del Rey Oaks and Seaside. Eucalyptus Road is located in the City of Seaside and the County of Monterey within the former Fort Ord. General Jim Moore Boulevard serves as the major north-south roadway through the southern portion of the former Fort Ord while Eucalyptus Road is a secondary road accessing future development in the former Fort Ord. General Jim Moore Boulevard begins north of State Route 218 and parallelsthe western edge of the former Fort Ord along the Del Rey Oaks and Seaside city limits. Farther north, General Jim Moore Boulevard intersects with Coe Avenue/Eucalyptus Road and continues to an intersection with Light Fighter Drive, which provides access to Highway One. General Jim Moore Boulevard ends at 3rd Street, where it becomes 4th Avenue in central Fort Ord on the CSUMB campus.

Existing and Surrounding Land Uses

Surrounding land uses include: low-density residential homes east of the existing alignment of General Jim Moore Boulevard; Fitch Middle School located at the Coe Avenue/Eucalyptus Road intersection in the northwest corner of the project area; a vacant lot designated Military Enclave at the northeast corner of the Coe Avenue/Eucalyptus Road intersection; the Bayonet Black Horse Black Horse Golf Course located northwest of the project area; and military residential housing located in the Presidio of Monterey (POM) annex located northeast of the proposed action/project.

Surrounding Land Use Designations

Surrounding land use and zoning designations along General Jim Moore Boulevard includes primarily Low Density/Single Family Residential, Parks and Open Space, Public/Institutional, and Recreational Commercial. Along Eucalyptus Road, zoning designations include Recreational Commercial, Low Density/Single Family Residential, University/Medium Density Residential, and School/University.

Noise

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.

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.

The project area is located entirely within property that is owned by the U. S. Army. Federal regulations (24 CFR 51.101) require that ambient noise levels be no more than 65 L_{dn} (CNEL).

State

The California Department of Health, Office of Noise Control, in Guidelines for Preparation and Control of Noise Elements in the General Plan, provides guidance to the local jurisdictions in the State on the acceptability of designated land uses within CNEL contours. Residential uses are normally unacceptable in areas exceeding 70 dBA CNEL and conditionally acceptable within 60 to 70 dBA CNEL. Commercial and professional office buildings and businesses are normally acceptable in areas up to 70 dBA CNEL and normally acceptable in areas exceeding 75 dBA CNEL. Between 67 and 77 dBA CNEL, commercial uses are conditionally acceptable, depending on the noise insulation features and the noise reduction requirements.

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 *Seaside General Plan*, *City of Del Rey Oaks General Plan*, and the *County of Monterey General Plan* establish levels of acceptable exterior noise exposure for the various types of land use. Of the three municipalities, the Seaside General Plan maintains standards that are more stringent than the others, so Seaside's standards were used to analyze the project. These standards are presented in Table 4.6.

Environmental Setting

Bollard and Brennan, Consultants in Acoustics and Noise Control prepared a noise impact evaluation for the proposed action/project. This section is based on their evaluation.

Existing Noise Environment

Noise levels within the project area vary by time of day. During peak hour travel times, ambient noise levels are higher than during midday or late night noise levels. Major sources of noise in the vicinity of the project area include vehicle noise on area roads and noise from the Monterey Peninsula Airport.

Aircraft activity around Monterey Peninsula Airport is a source of noise in the project area, resulting from flyovers, takeoffs, and landings of aircraft. The project area is located approximately 2.5 miles north of the Monterey Peninsula Airport, beyond the 55 CNEL contour from activities at the airport, which would be significantly affected by airport noise. The Marina Airport, which is a general aviation airport is located approximately five miles northeast of the project site and does not cause significant noise within the project area. Because the project area is located well beyond the noise impact areas of these Airports, this analysis focuses on noise generated by local traffic.

Table 4.2
Land Use Compatibility Criteria for Exterior Community Noise (L_{dn})
City of Seaside, California

Land Use Category	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential: low density, duplex, mobile home	Less than 55	55 to 70	70 to 75	Greater than 75
Residential: multi-family	Less than 60	60 to 70	70 to 75	Greater than 75
Schools, libraries, churches, hospitals, and nursing homes	Less than 60	60 to 70	70 to 80	Greater than 80
Open spaces: playgrounds, parks.	Less than 67	–	67 to 73	Greater than 73

Notes: With conventional construction, interior noise levels are typically 20 decibels lower than exterior noise levels when windows are closed, and ten decibels lower when windows are open. This table is based on exterior measurements. Normally Acceptable means specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation. Conditionally Acceptable means new construction or development should be undertaken only after detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventionally constructed buildings with closed windows and fresh air supply systems or air conditioning will normally suffice. Normally Unacceptable means 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 features included in the design. Clearly Unacceptable means new construction or development should generally not be undertaken.

Source: *Fort Ord Reuse Plan Noise Element Table 4.5-3* and *Seaside General Plan Table N*

Traffic on roadways in the vicinity of the project site is the major source of noise. The primary factors that determine roadway noise levels are total traffic volumes, the percentage of trucks and buses, average vehicle speeds, and natural or manmade noise attenuation features such as sound walls and landscaping. Roadways within the project area currently carry low levels of traffic.

General Jim Moore Boulevard

Background noise measurements were conducted on Wednesday, April 28, 2004 and Thursday, April 29, 2004 by Bollard and Brennan under contract to PMC, to document the existing noise environment at representative locations near sensitive receptors in the project vicinity. The purpose of the background noise measurements was to quantify existing traffic noise levels during the AM and PM peak hours at representative noise-sensitive land uses (residences and schools)

located along the project corridor. The noise level measurement results were also used to calibrate the Federal Highway Administration Highway (FHWA) Traffic Noise Prediction Model to generally reflect local conditions.

The noise level measurement results indicate that the measured existing peak hour traffic noise levels were fairly low, being well below the Federal 67 dB Leq Criteria. The results of the traffic noise level measurements are contained in Table 4.7.

Eucalyptus Road

Noise levels along Eucalyptus road are very low, as this roadway is currently gated and there are no existing uses served by this roadway. According to the traffic study performed for this proposed action/project, there is no traffic on Eucalyptus Road during the peak hour.

**Table 4.3
Noise Level Measurement Results**

Site	Location Relative to future Station Number/Type of Receiver/General Location	Peak Hour Period	Distance to Centerline	Measured Leq, dBA
1	Sta. 16+00/Residences/Carlton Drive	PM	50	63
2	Sta. 23+00/Residences/Plumas Avenue	AM	100	58
3	Sta. 37 + 50/Residences/Sierra and Mescal	PM	50	64
4	Sta. 45 + 00/Residences/Hilby and Mescal	PM	50	65
5	Sta. 70 + 50/Residences/Broadway Avenue	PM	50	64
6	Sta. 93+00/Residences/San Pablo Avenue	PM	50	60
7	Sta. 121+00/Residences/Coe Avenue	PM	50	61

Source: *Bollard & Brennan, Inc.*

Transportation and Circulation

Regulatory Framework

The *Fort Ord Reuse Plan* identifies the following policies that address transportation and circulation on the former Fort Ord:

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

Environmental Setting

The existing roadway alignment along General Jim Moore Boulevard and Eucalyptus Road are two-lane roadways within the project area.

The *Fort Ord Reuse Plan* identifies General Jim Moore Boulevard as providing access from State Route 68 and State Highway 218. According to the *Fort Ord Reuse Plan*, the Del Monte Avenue/Second Avenue/General Jim Moore Boulevard corridor is identified as the corridor that will serve as the north-south spine through the reuse area. Del Monte Boulevard would be extended southward from Marina to form a single multi-lane roadway extending to the existing General Jim Moore Boulevard/Eucalyptus Road intersection. For 2015, General Jim Moore Boulevard would continue to be used south connecting with both Broadway and State Highway 218 (Fort Ord Reuse Plan 1997). Eucalyptus Road would serve the areas proposed for development towards the Parker Flats area of former Fort Ord.

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, Marina, Carmel, 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 that serves the former Fort Ord. In October 1995, the Monterey-Marina line was modified to include service to CSUMB. This line (#7) operates with service approximately once each hour. Within the former Fort Ord, bus stops are located on General Jim Moore Boulevard, Gigling Road, Imjin Road, Abrams Drive, and Preston Drive (FORA 1997).

Utilities and Service Systems

Environmental Setting

The existing alignment of General Jim Moore Boulevard and Eucalyptus Road does not contain any sanitary sewer lines or water lines. The Marina Coast Water District has preliminary plans to construct water lines within the proposed alignment. Based on conversations with Creegan and D'Angelo Consulting Engineers, the Marina Coast Water District has contacted FORA to incorporate water lines within the proposed right of way.

The Monterey Peninsula Water Management District and California American Water Company are advancing a plan for Aquifer Storage (ASR), which may lead to construction of medium to larger diameter water pipeline in either the existing General Jim Moore Boulevard right-of-way or this proposed action/project right-of-way.

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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. The mitigations are numbered consecutively for each topic in alphanumeric format. It should be noted that this project is required mitigation as described in the *Fort Ord Reuse Plan* and *Fort Ord Reuse Plan EIR* (see Chapter 1, Purpose and Need for the Proposed Action/Project, above).

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 *Fort Ord Reuse Plan* and relevant General Plans that would be affected by the proposed action/project. Although the project area is

visible from select areas of the 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 not have an impact on identified scenic vistas or scenic resources within a state scenic highway.

Visual Character

Grading activities for the proposed action/project 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 approximately 596 trees within the limits of construction. In addition, approximately 18 trees would be outside the area of potential effect, with a high propensity for success. Removal of trees and vegetation 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 Recreation Policies B-2 and G-3 in the *Fort Ord Reuse Plan*. 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 and proposed tree replacement and preservation mitigation measure measures, the proposed action/project would result in a less than significant impact to the visual character of the project area.

Light and Glare

The proposed action/project does not currently include the installation of traffic signals, however, at a later date, traffic signals may be installed as warrants are met along General Jim Moore Boulevard.

Street lighting is proposed for installation along the entire length of the General Jim Moore Boulevard realignment to 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, alternating with signal arm poles located behind the curb line at which time signals are installed.

The proposed lighting sources along the proposed roadway alignment would be visible from adjacent land uses, particularly residential land uses located along General Jim Moore Boulevard. This additional lighting would emit additional light

and glare within the project area. This is considered a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a less than significant level.

Mitigation Measure

MM-1 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.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA

Implementation of the above 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 Air Quality Management Plan;
- Violate any ambient air quality standard, including Monterey Bay Unified Air Pollution Control District (MBUAPCD) 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;
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people.

Long-Term Operational Impacts

A letter was sent to the Association of Monterey Bay Area Governments to obtain a consistency determination with the *MBUAPCD Air Quality Management Plan*.

According to the Association of Monterey Bay Area Governments (Written Communication by Todd Muck, Association of Monterey Bay Area Governments, June 16, 2004), the proposed action/project has been included in the travel demand modeling performed to evaluate air quality conformity for the upcoming 2004/2005 through 2006/2007 Metropolitan Transportation Improvement (MTIP) and the 2005 Metropolitan Transportation Plan (MTP). Results of the analysis by the Association of Monterey Bay Area Governments shows the emissions resulting from projects included in the MTIP and MTP are below the approved emissions budget for the region. Therefore, the proposed action/project is consistent with the MBUAPCD *Air Quality Management Plan* and the proposed action/project would have a less than significant effect on regional ozone levels.

The North Coast Air Basin is a 'maintenance' area for the federal ozone standard. Section 176 of the Clean Air Act requires that all Federal actions conform to applicable State Implementation Plans (SIPs) to ensure that actions don't interfere with strategies used to attain the National Ambient Air Quality Standards (NAAQS). As the proposed action/project is located within an air basin designated as 'maintenance' area, a 'Conformity Analysis' with the State Implementation Plan (SIP) was conducted for the proposed action/project.

The short-term emission calculations from non-road vehicle construction equipment were calculated using URBEMIS-2002, an air quality-modeling program released by the California Air Resources Board (CARB). Project emissions would conform to the General Conformity rule required for federal projects in accordance with the Clean Air Act, since the total emissions of ROG and NO_x would be approximately 2.92 tons per year and 23.33 tons/year respectively, which is within the allowable emissions. No state or federal air quality standards would be exceeded due to short-term nature of the construction impacts.

Short-Term Construction Impacts

Construction of the proposed action/project would result in potential short-term adverse air quality impacts. The primary impact would include dust emissions and diesel exhaust generated by equipment and vehicles during construction of the proposed action/project. Fugitive dust would also be emitted as a result of wind erosion of exposed earth surfaces. Sensitive receptors in the vicinity of the project area include single family homes located along General Jim Moore Boulevard and the Fitch Middle School located within 200 feet of the northern edge of the project area.

The MBUAPCD threshold of significance for PM₁₀ (particulate matter) emissions is 82 pounds per day or greater. The MBUAPCD suggests that minimal grading activity generates about ten pounds of PM₁₀ per day per acre, while excavation and earthmoving generates about 38 pounds of PM₁₀ 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 undergoes excavation or earthmoving.

The proposed action/project would involve grading of approximately 69 acres for construction of the proposed action/project. If dust control measures are not included as part of project construction, construction activities would represent a potentially significant impact. In addition, operation of construction equipment in the vicinity of sensitive receptors located within the project area would result in exposure to diesel exhaust. Implementation of the following mitigation measures would reduce this potentially significant short-term air quality impact to a less than significant level.

Mitigation Measures

- MM-2** FORA shall include a dust control plan in all construction documents for the proposed action/project, to include all of the following measures to adequately control dust. 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. If all of the following measures are not implemented, grading shall be limited to 2.2 acres per day during earthmoving efforts (grading and excavation) or 8.1 acres per day during minimal earthmoving (finish grading) as a potential threshold of significance by the Monterey Bay Unified Air Pollution Control District:
- (a) Water all active portions of the construction site at least twice daily;
 - (b) Suspend all excavation and grading operations when wind speeds exceed 15 miles per hour averaged over one hour, or when watering activities are inadequate to control airborne dust;
 - (c) Replace ground cover or apply MBUAPCD-approved chemical soil stabilizers according to manufacturer's specifications to all inactive portions of the construction site (previously graded areas inactive for four days or more), when airborne dust conditions are visible;
 - (d) Apply water two times daily or Monterey Bay Unified Air Pollution Control District approved chemical stabilizers according to manufacturer's specifications to all inactive portions of the construction site (previously graded areas inactive for four days or more), when airborne dust conditions are visible;
 - (e) Sufficiently water and securely cover all material transported off site while in transit and adjust on-site loads as necessary to

prevent airborne dust conditions. Haul trucks shall maintain enough freeboard to prevent airborne dust conditions;

- (f) Plant vegetative groundcover in, or otherwise stabilize disturbed areas as soon as grading and construction activities in those areas are completed;
- (g) Cover or apply approved Monterey Bay Unified Air Pollution Control District stabilizers to material stockpiles that remain inactive for more than 72 consecutive hours;
- (h) Provide dust free stabilized surfaces at the exit of construction sites for all exiting trucks;
- (i) Sweep adjacent public streets at the end of each day if visible soil material is carried out from the construction site;
- (j) Limit traffic speed on all unpaved roads to 15 miles per hour or less;
- (k) Post a publicly visible sign that specifies the telephone number of the on-site contractor and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action by the end of the same day if the complaint is received by 12:00 noon and within 24 hours if the complaint is received later than 12:00 noon. The phone number of the MBUAPCD shall be visible to ensure compliance with Rule 402 (Nuisance); and
- (l) The grading contractor shall appoint a qualified site monitor to ensure that the plan is implemented.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA

MM-3

To limit diesel emissions, FORA shall limit the pieces of diesel-powered construction equipment used at any one time and limit the hours of operation for heavy-duty equipment as feasible. Gasoline-powered equipment will be used as an alternative to diesel whenever possible and when comparable equipment and technology is available.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA

Implementation of the above mitigation measures would reduce construction dust impacts and the emission of diesel exhaust within the project area to a less than significant level by requiring that grading activities are limited to 2.2 acres per day or that FORA implement a dust abatement program and that FORA limit the operation of diesel-powered construction equipment within the project area during short-term construction activities within the project area.

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 Habitat Management Plan (HMP). 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.

Therefore, this biological resources impact analysis assumes that the Habitat Conservation Plan (HCP) and the Implementation Agreement (IA) that is tiered off

the HMP will be signed by all the agencies responsible for its implementation and that in the interim, implementation of the HMP will mitigate significant impacts to species and habitats covered under the HMP. Prior to finalizing the HCP and IA, the actions required are addressing impacts to federal and state-listed species, species of special concern, compliance with federal and state *Endangered Species Act* requirements, policies of the *Fort Ord Reuse Plan*, *Seaside General Plan*, *Del Rey Oaks General Plan*, *County of Monterey General Plan* and any other local ordinances protecting biological resources.

The proposed action/project would result in the removal of vegetation within the designated clearing limits but not exceeding 160 feet of both sides of the existing Eucalyptus Road alignment for approximately 8,057 linear feet and removal of vegetation within an approximate 250-foot-wide corridor paralleling 12,800 linear feet of General Jim Moore Boulevard. This would result in the direct loss of approximately 42.3 acres of maritime chaparral, 4.3 acres of mature maritime chaparral, 13.1 acres of degraded maritime chaparral, and 3.6 acres of coast live oak woodland. Additionally, there would be direct loss of several special status plant species: approximately 1.0 acre of Sand gilia (*Gilia tenuiflora ssp. arenaria*), 18.2 acres of Monterey spineflower (*Chorizanthe pungens var. pungens*), 0.8 acre of Seaside bird's beak (*Cordylanthus rigidus var. littoralis*), 62 plants of coast wallflower (*Erysimum ammophilum*) and several plants of sandmat manzanita and Monterey ceanothus. A summary of the project effects is shown in Table 4.4 and the extent of habitat and species impacts within the limit of disturbance is depicted graphically on Figures 4.4A and 4.4B, respectively.

Removal of Maritime Chaparral, Coastal Scrub, and Grassland Habitats

Because the project area is located within HMP designated development parcels, the loss of habitats and special status species were anticipated and are mitigated through the "set aside" and management of over 16,000 acres on former Fort Ord for habitat conservation. The HMP is a base-wide strategy to insure that adequate habitat reserves are established that support the full range of HMP species to sustain those species and to compensate for losses from development and reuse of the former U.S. Army base. The HMP has been approved by the USFWS as the basis for consultation with the U.S. Army under the federal *Endangered Species Act* and has been signed by various participatory agencies, organizations and jurisdictions. Considering all of these factors, with implementation of the HMP, the loss of maritime chaparral, oak woodland, and the component species of these habitats for the proposed action/project is not considered significant. Sandmat manzanita and Monterey ceanothus are major components of the extensive areas of maritime chaparral that will be set aside and managed for habitat conservation on former Fort Ord and therefore the project area will not have an adverse effect on these species.

Table 4.4
Summary of Project Effects to Biological Resources

Habitats to be Removed	Maritime Chaparral	42.3 acres	
	Mature Maritime Chaparral	4.3 acres	
	Degraded Maritime Chaparral	13.1 acres	
	Coast Live Oak Woodland	3.6 acres	
Special Status Plants to be removed	Sand gilia (<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>)	1.0 acre (1,310 plants)	
	Monterey spineflower (<i>Chorizanthe pungens</i> var. <i>pungens</i>)	High Density	9.8 acres
		Medium Density	3.5 acres
		Low Density	4.8 acres
	Seaside bird's beak (<i>Cordylanthus rigidus</i> var. <i>littoralis</i>)	0.8 acre	
Coast wallflower (<i>Erysimum ammophilum</i>)	62 plants		

Source: Zander and Associates, November 2004.

The majority of recorded occurrences of coast wallflower on former Fort Ord are within the Fort Ord Dunes State Park, the Fort Ord Natural Reserve and the Natural Resource Management Area and because coast wallflower is an HMP species, management activities within these areas will address the conservation of these populations. Consequently, the loss of 62 plants of coast wallflower with implementation of the proposed action/project is not expected to adversely affect the species.

Although there will be removal of maritime chaparral, coastal scrub, and grassland habitats in the vicinity of the proposed action/project, and there would be a potentially significant impact, the project area is within HMP designated "Development" parcels, and as such the loss of habitats and special status species were anticipated and are mitigated through the set aside and management of over 16,000 acres on former Fort Ord for habitat conservation. As such, the potential impact of the proposed action/project on maritime chaparral, coastal scrub, and grassland habitats are less than significant with implementation and compliance with the HMP and HCP.

Special Status Plant Species

Sand gilia and Monterey spineflower are both federally listed species that will be affected by the proposed action/project. Under the federal Endangered Species Act (ESA), any activity with a federal nexus such as this one (e.g. U.S. Army authorization) that may affect a federally listed plant or animal requires consultation (Section 7) with the U.S. Fish and Wildlife Service (USFWS). Considering that: 1)

the proposed action/project is located within HMP designated "Development" parcels, 2) the U.S. Army has already consulted with the USFWS on the closure and reuse of Fort Ord and the USFWS issued a biological opinion on the Army's actions relative to Monterey spineflower and sand gilia, and a biological opinion addressing the loss of critical habitat for Monterey spineflower (1-8-01-F-70R), there should be no need for any further consultation with USFWS. However, the federal entities involved with the project may elect to confirm with USFWS that the proposed action/project conforms with all provisions of the previous Biological Opinions prior to proceeding.

Sand gilia is also a state-listed species as is seaside bird's beak. Removal of plants of these species will require incidental take authorization under the California Endangered Species Act (CESA). Currently, the principal parties that have or will be acquiring land at former Fort Ord are in the process of preparing a Habitat Conservation Plan (HCP) and Implementing Agreement (IA), which will provide the basis for issuance of basewide incidental take authorizations from both the USFWS and California Department of Fish and Game (CDFG). However, if the HCP and IA are not fully executed prior to initiation of the proposed action/project, then independent authorizations for incidental take for sand gilia and seaside bird's beak will be required.

While there is precedent for obtaining individual incidental take authorizations for state-listed plants on former Fort Ord, CDFG is discouraging such applications and is recommending that projects affecting these species be addressed through execution of the HCP. Should an applicant choose to pursue an individual take authorization, mitigation for the loss of plants and suitable habitat for the plants will need to be provided. Based on the data provided by the Army and reconnaissance surveys conducted in 2003, Zander Associates estimates that about 0.8 acre of seaside bird's beak habitat could be affected by the project.

Although there will be removal of special status plant species in the vicinity of the proposed action/project, and there would be a potentially significant impact, the project area is within HMP designated "Development" parcels, and as such the loss of habitats and special status species were anticipated and are mitigated through the set aside and management of over 16,000 acres on former Fort Ord for habitat conservation. As such, implementation of the following mitigation measures would bring the potential impact of the proposed action/project to a less than significant level by ensuring compliance with the HMP, HCP, and the ESA.

Mitigation Measures

- MM-4** If the Habitat Conservation Plan and Implementation Agreement are not fully executed prior to initiation of construction, then a preconstruction biological survey shall be performed by a Qualified Biologist and independent authorization for incidental take for sand

gilia and seaside bird's beak shall be obtained from the California Department of Fish and Game. The incidental take authorization will likely require mitigation for the loss of plants and suitable habitat for sand gilia and seaside bird's beak. FORA is currently undertaking efforts to mitigate sand gilia losses for other road improvement projects on the former Landfill. Mitigation would follow what was approved with the issuance of take authorizations for previous road projects and result in an appropriate replacement ratio and creating suitable habitat as determined by the biologist hired to perform the preconstruction survey and consistent with California Department of Fish and Game requirements. This mitigation will not need to be implemented if there is an approved base wide Habitat Conservation Plan in place.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA

MM-5

To obtain incidental take authorization for seaside bird's beak, the actual extent of Seaside bird's beak habitat and the number of individuals to be removed shall be determined through appropriately timed directed surveys in the summer of 2005. Based on California Department of Fish and Game recommendations for previous mitigation proposals for seaside bird's beak, both the area impacted as well as the number of individuals lost should be mitigated at an appropriate replacement ratio as determined by the biologist hired to perform the time-directed surveys. Previously identified potential mitigation areas for Seaside bird's beak on the former Fort Ord are located on land to be transferred to the Bureau of Land Management, specifically on a former range site (Range 45). This site was identified because it has sandy substrates similar to those known to support seaside bird's beak and is on land that will be transferred to BLM for habitat restoration and management. The site is approximately five acres and could provide enough area to accommodate the required project mitigation. This mitigation will not need to be implemented if there is an approved base wide Habitat Conservation Plan in place.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA

Implementation of the above mitigation measures would reduce impacts to special status plant species to a less than significant level by ensuring compliance with the HMP, HCP, ESA, and the MBTA, which requires 16,000 acres on former Fort Ord to be set aside and managed for habitat conservation.

Special Status Wildlife Species

California Tiger Salamander

Potential upland habitat for the federally listed California tiger salamander has been identified within the southern portion of the project area. As described above, under the federal ESA, any activity with a federal nexus such as this one that may affect a federally listed plant or animal requires consultation (Section 7) with the USFWS. Although the HMP addresses impacts to CTS, the *Biological and Conference Opinion on the Closure and Reuse of Fort Ord, Monterey County, California* (1-8-99-F/C-39R) did not include a provision for incidental take of CTS because the species was not listed or proposed for listing at that time. The Army is currently re-initiating consultation with the USFWS to address incidental take of CTS for Army pre-disposal and property transfer actions and is requesting USFWS issue a Non-Jeopardy Biological Opinion. Road improvements such as General Jim Moore Boulevard and Eucalyptus Road will be addressed in the Biological Opinion the Army is requesting. If the proposed action/project does not comply with the conditions in the Biological Opinion, this would be considered a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a less than significant level.

Mitigation Measure

MM-6 To address incidental take of California Tiger Salamander, the proposed action/project shall comply with the conditions in the Biological Opinion to be issued to the Army by the USFWS. Only those conditions relevant to the project area would apply.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA

Black Legless Lizard and California Horned Lizard

The black legless lizard and California horned lizard may be present in the study area. The black legless lizard is not federally- or state-listed, but it is designated as a Species of Special Concern by CDFG. Loss of potential habitat for the black legless lizard is anticipated, and mitigation is provided through the set-aside and management of habitat reserve areas within the boundaries of the former Fort Ord as described in the April 1997 HMP.

The California horned lizard can be relatively mobile, and as such is likely to avoid the construction areas and construction equipment. No substantial loss of habitat for this species is expected to result from project construction. Therefore, this impact would be considered less than significant.

Monterey dusky footed woodrat and Monterey ornate shrew

Potential habitat for the Monterey dusky footed woodrat and Monterey ornate shrew is identified within the project area. However, the project is not expected to result in a substantial loss of habitat for either of these species. Therefore, this impact would be considered less than significant.

Birds of Prey, Migratory Birds, and Bats

The oak woodland provides potential nesting habitat for a variety of special-status and migratory birds and potential roosting sites for special-status bats. Active nests of birds-of-prey and other migratory birds are protected under the Migratory Bird Treaty Act and under Section 3503.5 of the Fish and Game Code. Construction activities within or adjacent to the oak woodland habitat could disturb active nests through direct removal (if trees are to be removed) or by causing abandonment by the adults. Established roosts of special-status bat species are of concern to CDFG and if active roosts are present in the oak woodlands, these could be disturbed during tree removal and/or construction activities.

Although there are special status wildlife species in the vicinity of the proposed action/project, and there would be a potentially significant impact, the project area is within HMP designated "Development" parcels, and as such the loss of habitats and special status species were anticipated and are mitigated through the set aside and management of over 16,000 acres on former Fort Ord for habitat conservation. As such, implementation of the following mitigation measures would bring the potential impact of the proposed action/project to a less than significant level by ensuring compliance with the HMP, HCP, ESA, and the MBTA.

Mitigation Measure

MM-7 To comply with the Migratory Bird Treaty Act and the California Fish and Game Code relative to active bird nests and special status bat maternity roosts, the following measures should be implemented:

- Migratory birds: If construction activities are initiated after August 1 and before January 15 (outside of the typical nesting season for the birds-of-prey and migratory birds that may nest in the study area), then pre-construction surveys for active nests should not be necessary. If activities are initiated before August 15 or after January 15, then pre-construction surveys for active nests within a certain radius of proposed activities are recommended. If active nests are found and the biologist determines that construction activities would remove the nest or have the potential to cause abandonment, then those activities should be avoided until the young have fledged as determined through monitoring of the nest.

Once the young have fledged, construction activities can resume in the vicinity.

- Special-status bats: Prior to tree removal in the coast live oak woodland, a qualified biologist shall survey the trees for presence of roosting bats. If special-status bat species are present, the following measures should be implemented.
 - Tree removal should not occur if maternity bat roosts are present (between April 15 and August 1) in the trees to be removed.
 - No tree removal should occur within 300 feet of the maternity roost until all young bats have fledged – as determined by a qualified biologist.
 - If special-status bats are present but there is not an active maternity roost, a Memorandum of Understanding (MOU) with the CDFG should be obtained in order to remove the animals prior to tree removal. Alternate habitat may need to be provided if bats are to be excluded from maternity roosts. A roost with comparable spatial and thermal characteristics should be constructed as directed by a qualified biologist. In the event that adult bats need to be handled and relocated, a qualified biologist should prepare and implement a relocation plan subject to approval by CDFG that includes relocating all bats found on-site to an alternate suitable habitat. A Mitigation and Monitoring Plan that mitigates for loss of bat roosting habitat should be prepared by a qualified biologist and approved by CDFG prior to tree removal.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA and CDFG

Implementation of the above mitigation measures would reduce impacts to special status wildlife species to a less than significant level by ensuring compliance with the HMP, HCP, ESA, and the MBTA, which requires 16,000 acres on former Fort Ord to be set aside and managed for habitat conservation.

Trees

Based on preliminary tree counts conducted by Pacific Municipal Consultants, the proposed action/project may result in the removal of approximately 596 trees, including 528 Coast live oak (*Quercus agrifolia*), which are protected trees, five manzanita (*Arctostaphylos tomentosa* ssp. *tomentosa*), seven Monterey cypress

(*Cupressus macrocarpa*), 56 Monterey pine (*Pinus radiata*) trees with construction of the proposed action/project. In addition, another 18 trees located within fifty feet of the proposed grading limits may be affected by construction activities. Table 5.2 lists the approximate tree loss and trees within fifty feet of grading limits of the proposed action/project.

Table 4.5
Approximate Tree Loss

Tree Species	Potential Tree Removal within Grading Limit ¹	Trees Within 50 feet of grading limits ¹
Coast Live Oak (<i>Quercus agrifolia</i>)	528	17
Monterey cypress (<i>Cupressus macrocarpa</i>)	7	1
Monterey Pine (<i>Pinus radiata</i>)	56	0
Manzanita (<i>Arctostaphylos hookerii</i>)	5	0
Total	596	18

Source: Pacific Municipal Consultants

1. Significant trees include single-trunked native trees that are six inches diameter breast height (DBH) and larger, or multi-trunked native tree having an aggregate diameter of ten-inches DBH and larger, as well as any significant trees 19 inches DBH and larger.

The proposed right of way of General Jim Moore Boulevard would eventually be transferred to the City of Seaside and City of Del Rey Oaks. Eucalyptus Road would be transferred to the City of Seaside and the County of Monterey. Within the City of Seaside, Chapter 8.54 of the City of Seaside Municipal Code establishes regulations that control the removal, protection, and preservation of trees within the City. Under Section 8.54.020, trees that are protected by this ordinance include all trees with a circumference of at least 20 inches (approximately six inches in diameter) measured at 24 inches above the ground. Under 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. In addition, Section 8.54.080 requires protection of trees during construction activities. Chapter 12.16 of the City of Del Rey Oaks Municipal Code controls the removal, protection, and preservation of trees all oaks and other significant trees on all public and private property within the city. Chapter 21.64.260 of Title 21, Zoning Ordinance for the County of Monterey,

provides regulations that control the removal, protection, and preservation of trees within the County.

Trees regulated by Section 8.54 of the City of Seaside Municipal Code, Chapter 12.16 of the City of Del Rey Oaks Municipal Code, and Chapter 21.64.260 of Title 21, Zoning Ordinance are located within the project area. Although, specific tree removal plans have not been prepared for the proposed action/project, based on the preliminary tree count within the project area, the proposed action/project would require the removal of approximately 596 trees and has the potential to affect approximately 18 trees that are located within 50 feet of grading limits for the action/project, as shown in Table 4.5. These tree removal estimates are approximate, and more detailed removal plans would be necessary prior to grading and construction activities at the project site.

Removal of trees has the potential to reduce habitat resource function and value within the project area. FORA will salvage and relocate as many Coast Live Oak (*Quercus agrifolia*) trees as possible within the grading limits. In addition, the following mitigation measures would reduce potentially significant impacts from the removal of trees in the project area to a less than significant level.

Mitigation Measures

MM-8 Prior to the commencement of construction activities, FORA will engage a Registered Professional Forester or Certified Arborist to assist in field adjustments of tree removal and prepare a tree removal and replacement plan for the proposed action/project after the proposed improvements have been staked in the field. The tree removal plan will 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 fifty feet); and will indicate that all oak trees, which require pruning are pruned by a Certified Arborist prior to initiation of construction activities. The tree removal and replacement plan will ensure that as many native trees as possible are salvaged and replanted within the project area and that Coast live oak (*Quercas agrifolia*) trees that cannot be salvaged and relocated within the proposed alignment that are greater than six inches diameter at breast height (dbh) are replaced at a ratio based upon an inch for an inch replacement of the removed tree(s).

The following specifications will be included within the tree replacement plans: all replacement trees will be monitored and replaced up to one year after planting if replacement trees die; all replacement trees will be Coast live oak (*Quercas agrifolia*) and at least five-gallon specimens; and that replacement trees will be planted

within or immediately adjacent to the project area or in other areas in close proximity to the project.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA

MM-9

Prior to commencement of construction activities, to the greatest extent feasible, the critical root zone (measurement of 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) of any tree or groups of trees to be retained will be fenced with a four-foot high brightly colored synthetic fence at the outermost edge of the critical root zone to prevent injury to the trees prior to grading and during construction activities within the project area. The fencing will 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.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA

Implementation of these mitigation measures would ensure that protected trees within the project area are replaced and protected during construction activities, as appropriate, to restore habitat values within the project area, reducing potentially significant impacts to protected trees to a less than significant level.

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.

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.

John Nadolski, Cultural Resource Specialist with Pacific Municipal Consultants conducted a field reconnaissance of the project area in April 2004 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 the project Area of Potential Effect (APE). Due to the absence of known cultural resources within the area that would be disturbed by the proposed action/project, it is not anticipated that the proposed action/project would 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-10 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 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.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA

Historic Resources

The proposed action/project is not located within a historic district and no historic properties are listed or potentially listed on the National Register of Historic Places were discovered during the records search for the proposed action/project. However, based on the fact that the project area is located within the former Fort Ord, currently under the jurisdiction of the U.S. Army, the proposed action/project would be subject to 36 CFR 800.6(e) under any of the following circumstances:

- a. If any person requests the Advisory Council on Historic Preservation to review the findings in accordance with 36 CFR 800.6(e); and
- b. If the project changes the significance of a historic property (as per 36 CFR 800.5[c]); and
- c. If previously undocumented properties are discovered during implementation of the undertaking, or if a known historic property will be affected in an unanticipated manner (as per 36 CFR 800.11); and
- d. If a property that was to be avoided has been inadvertently or otherwise affected (as per 36 CFR 800.4[c];800.5), and
- e. If any condition of the undertaking, such as a delay in implementation or implementation phases over time, any justify reconsideration of the current National Register status of properties within the undertaking's Area of Potential Effects (as per 36 CFR 800.4[c]).

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 10 (MM-10) identified above.

Geology and Soils

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

- Expose people or structures to major geologic hazards (including seismic hazard, ground shaking, seismic related ground failure, liquefaction or landslide); or
- Result in significant erosion or unstable/adverse soil conditions form excavation, grading, or fill.

Geologic Hazards

Seismic hazards at the project site are considered high. The primary seismic hazard within the project area would be the potential for strong ground shaking from an earthquake on the faults in the vicinity of the project site. However, the proposed action/project consists of re-alignment of an existing roadway and associated improvements (e.g. medians, a bike trail, and sidewalks). The results of the geologic investigation performed by Pacific Crest Engineering, Inc. indicate that from a geotechnical standpoint the roadway may be developed as proposed provided that the recommendations within the geotechnical investigation are incorporated into final improvement plans for the proposed action/project. Therefore, implementation of the following mitigation measure would reduce this potentially significant impact

resulting from geologic hazards affecting the roadway and safety of people to geologic hazards to a less than significant level.

Mitigation Measure

MM-11 The proposed action/project will be designed in accordance with the recommendations contained within the Preliminary Soils Engineering Report (dated: February 27, 2004) prepared by Pacific Crest Engineering, Inc. 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. Recommendations will be incorporated into final improvement plans for the proposed action/project.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA

Soil Erosion

The proposed action/project would involve excavation of approximately 450,000 cubic yards of soil and fill of approximately 301,000 cubic yards of soil. According to Creegan and D'Angelo Consulting Engineers, the total area of disturbance within the project area would be approximately 2,960,000 square feet (69 acres) during construction activities. Removal of existing vegetation would expose soil to the elements (e.g. wind and rain). The proposed action/project includes hydroseeding of exposed surfaces to reduce the effects of erosion within the project area. 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-12 An erosion control plan will be prepared and reviewed for approval by FORA and Seaside, Del Rey Oaks, Monterey County, private individual, and/or the United States Army, as applicable prior to construction of the proposed action/project. The erosion control plan will be included in construction documents for the proposed action/project and will be implemented during and periodically following construction. Erosion control measures will include, but 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; and
- 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.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: 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.

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.

Hazardous Materials

The proposed action/project, which includes the construction of roadways and associated improvements, would not involve the transport, use or disposal of hazardous materials; however, vehicles traveling along the roadways may sporadically transport hazardous materials and hazardous wastes as is commonly accepted.

Munitions and Explosives of Concern (MEC)

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 Eucalyptus 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 ordnance 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 ordnance were used during training activities at the various ranges within the MRA. These ordnance 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.

The proposed General Jim Moore Boulevard realignment and the lands south of Eucalyptus Road are in the MRA which means there are potential MEC's located

throughout the proposed project site. Other potentially high concentrations of MEC's are located at various locations north and east of 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 measure would reduce this potentially significant impact to a less than significant level are remediated prior to construction activities.

Mitigation Measure

MM-13 Prior to any grading or construction activity within the project area, FORA will obtain formal approval from the U.S. Army 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 United States Army and the California Department of Toxic Substances and Control (DTSC).

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: U.S. Army and DTSC

MM-14 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.

Party Responsible for Implementation: FORA

Party Responsible for Monitoring/Reporting: FORA and the U.S. Army