

# FORT ORD REUSE PLAN



*Volume 2:*  
**Reuse Plan Elements**

*Adopted June 13, 1997*



# FORT ORD REUSE PLAN

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**Document Preparers**



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## 4.1 Land Use Element

### 4.1.1 Introduction

Land use is a major focus of the Fort Ord Reuse Plan. The Land Use Element offers a broad discussion of land use issues, constraints and opportunities. It promotes a balanced and functional mix of land uses consistent with the community values of Fort Ord jurisdictions and the Monterey Peninsula generally, and reflects the opportunities and constraints affecting land use at the former Fort Ord identified in other elements of this plan.

*Goal: Promote the highest and best use of land through orderly, well-planned, and balanced development to ensure educational and economic opportunities as well as environmental protection*

To establish a pattern for land use in the former Fort Ord, the Land Use Element is designed to serve as a guide for future development of the land. The element provides for orderly growth by setting forth general designations for the location, extent, intensity, and distribution of specified land uses. It inventories existing land uses, discusses potential conflicts between land uses and offers recommendations in the form of land use policy statements.

The dramatic setting of the former Fort Ord between the coastline of Monterey Bay and the undeveloped Oak Woodlands to the east gives these 44 square miles of land a special quality of natural abundance and variety.

The military installations which were developed here, mostly since preparations began for World War II in the late 1930s, provided a land use pattern and infrastructure that is not unlike that of many communities: residential areas that include single-family, suburban-style homes and multi-unit apartment buildings; commercial areas for retail or other services, such as gas stations, mini-markets and fast food facilities; elementary and middle schools for children living here, a hospital and other medical facilities; recreational areas including golf courses, tennis courts, playgrounds and a pool; and open space reserved for hunting, fishing and camping, or left undeveloped in its natural state (See Figure 4.1-1).

Other land uses were more uniquely suited to the defense-related purposes of this community: barracks and mess halls for the many troops coming here to train; military support areas, such as motor pools, machine shops, and a small airfield; soldier training areas including track and field and stadium facilities, and firing ranges near the beach and in the inland areas.

The communities growing up around the base in many ways supported the needs and development of the former Fort Ord. Although much of the surrounding land remains to this day in agricultural use, the cities of Marina and Seaside, in particular, became closely linked with the military mission of their neighbor, providing housing, commercial services, high school capacity and other facilities for the people living and training at the former Fort Ord. And even though Marina and Seaside had no jurisdictional authority over the federal lands of Fort Ord, their city limits extended into the base: 15%, or 4,122 acres of the former Fort Ord, lies within Seaside city limits, 12%, or 3,361 acres, within Marina city limits. The remaining acreage, 73% or 20,537 acres, is located in unincorporated Monterey County.



Much as the growth and economic development of these cities and their neighbors on the Monterey Bay Peninsula were tied to the operations taking place at Fort Ord, the 1991 decision of the Department of Defense to place Fort Ord on its official closure list, as part of an overall budget reduction program, was reflected in a sudden downturn of economic activity and decrease in service levels to the military personnel which began to leave the base. Although Fort Ord was initially downsized, rather than completely closed, the large population loss has considerably affected the surrounding communities.

The Fort Ord Base Reuse Plan constitutes the next chapter in the history of this land. This Land Use Element is intended to establish an updated pattern for land use at the former Fort Ord, taking into consideration the needs of the military families who continue to live on the base, as well as the surrounding cities and jurisdictions that are faced with the challenge of creating a new “seamless” community from their existing communities and the Fort Ord lands that were formerly under federal jurisdiction.

Toward this “seamless” community, the Land Use Element sets standards for intensity of development and to promote a balanced and functional mix of land uses consistent with existing community values. The land use planning concepts, overall goal and objectives, and policies and programs to implement these, were generated from specific issues and requirements identified by each jurisdiction, as well as an overall vision for reuse of the base developed on a more regional level.

The global goal guiding all planning and land use decisions for the former base can be summarized by the three “E’s”: Education, Environment, and Economy. From this major focus, more specific objectives have evolved for the four specific areas of land use: residential, commercial, open space/recreation, and institutional.

The land use concept that provides the foundation for the policy structure for land use at the former Fort Ord is based on a set of basic concepts for creating a cohesive community. They include:

- Identifiable centers to add focus to the larger area;
- Diversity and choice to enhance opportunity and interaction;
- Alternative transportation that stresses access vs. speed and encourages a pedestrian-friendly environment;
- Housing diversity in type, density and location; and
- Natural and preserved areas that link all sectors together in a seamless way.

The goal of this general concept is to quickly integrate the former Fort Ord into the local economy, maintain a housing/retail/jobs balance, and make full use of existing infrastructure and infill opportunities. With the educational facilities as the centerpiece creating energy and identity around them, land use



## Figure 4.1-1, Existing Development Pattern at Fort Ord

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*

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planning at the former Fort Ord will emphasize human scale development, village-type mixed use centers, a circulation system that responds to land use priorities, and connectivity to the natural environment.

### 4.1.1.1 The Fort Ord Planning Area

This section incorporates by reference information from the Land Use Baseline Study of Fort Ord, California (U.S. Army Corps of Engineers, Sacramento District, 1992b), the Environmental Impact Statement for Fort Ord Disposal and Reuse (U.S. Army Corps of Engineers, Sacramento District, June 1993), and the Supplemental Environmental Impact Statement (U.S. Army Corps of Engineers, Sacramento District, Dec. 1995). These documents are available at the public information repository established at the Seaside Branch Library.

The former Fort Ord is located adjacent to unincorporated county land and the cities of Marina, Seaside, Sand City, Del Rey Oaks, and Monterey. The Fort Ord planning area is illustrated in Figure 4.1-2. Since the former Fort Ord is still largely under federal jurisdiction, neither the surrounding cities nor county have jurisdictional authority over the former Fort Ord until such land conveyances have been made.

The Fort Ord planning area is located within the jurisdictional or political boundaries of the following agencies.

#### **State and Regional Agencies**

**Association of Monterey Bay Area Governments:** a voluntary council of governments.

**California Coastal Commission:** responsible for administering the state's coastal management program (the portion of the former Fort Ord west of State Highway 1 is in the coastal zone, see Figure 4.1-2, Fort Ord and surrounding local jurisdictions).

**California Department of Transportation:** responsible for the maintenance and administration of the California highway system.

**California State Parks Department:** responsible for operating the Fort Ord Dunes State Park.

**California State University:** responsible for operating a state university at Monterey Bay.

**Monterey County Local Agency Formation Commission (LAFCO):** responsible for reviewing proposals involving boundary changes, including but not limited to cities, counties, and special districts.

Monterey County LAFCO is authorized under the Cortez-Knox Act and based on a resolution adopted by LAFCO, will not consider any boundary changes at Ford Ord until an EIR is certified by the FORA Board. Once this action is complete, and the Reuse Plan is adopted, LAFCO will begin to consider formal requests for reorganizations (i.e., boundary changes) form individual

**Figure 4.1-2, Planning Areas and Jurisdictions**

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*



jurisdictions. These require formal action by LAFCO once a property tax transfer agreement has been reached between the county and the individual jurisdictions.

**Special Districts:** established to implement specific activities within defined boundaries (e.g. Monterey Peninsula Water Management District, Marina Coast Water District, Salinas Rural Fire District, Monterey County Resource Conservation District, Monterey Peninsula Airport District, Seaside County Sanitation District, Monterey Regional Parks District, etc.).

**University of California:** responsible for creating a research and technology park and managing natural reserve and habitat areas.

### 4.1.1.2 The Local Setting

This section describes the existing conditions for the former Fort Ord and for the jurisdictions that currently encompass areas of the former Fort Ord: the cities of Marina and Seaside, and the County of Monterey. The generalized land use setting for these surrounding jurisdictions is illustrated in Figure 4.1-3.

**General Characteristics:** The former Fort Ord is bounded by Marina on the north; unincorporated county land on the east; Del Rey Oaks, Monterey, and unincorporated land on the south; and Sand City, Seaside, and Monterey Bay on the west.

Most of the approximately 28,000-acre Fort Ord area consists of undeveloped training and open space areas, with approximately 82% (23,000 acres) undeveloped and 18% (5,000 acres) developed. The three major developed areas within the former Fort Ord are the former Main Garrison and East Garrison areas, and Marina Municipal Airport, formerly Fritzsche Army Airfield.

**Population:** In 1990, the resident population at Fort Ord was approximately 31,000, 8 percent of the total population of Monterey County. At that time, 14,000 soldiers and 17,000 family members resided on Fort Ord.

The on-post resident population was divided between the two municipalities of Marina and Seaside. Through 1990, 17,139 people (56%) were within the Seaside city limits and 13,321 people (44%) were within the Marina city limits (Harding Lawson Associates, 1991, Workplan remedial investigation/feasibility study, Fort Ord, CA).

### **City of Marina**

**General Characteristics:** The City of Marina is located immediately north of the former Fort Ord and south of the Salinas River (Figure 4.1-3). The city was incorporated in 1975 and consists of approximately 6,400 acres. The area located within the former Fort Ord encompasses approximately 55% of the total number of acres within the city. The Marina planning area, which excludes the former Fort Ord but includes a substantial area north of the city, totals 6,145 acres (City of Marina General Plan, 1982). A large portion of the land is undeveloped, but the predominant land use in the incorporated area is single-family residential.





Marina’s Sphere of Influence (SOI) extends north and east of the existing city limits. The northern portion of the SOI lies within the planning area, while the eastern portion includes the former Fort Ord and is outside the planning area. A portion of Marina is located in the coastal zone, primarily the incorporated area west of State Highway 1. The Local Coastal Program (LCP) is the controlling plan in these areas.

**Existing Land Use:** The City of Marina’s predominant land use is residential. Another major land use is the approximately 1,820-acre Armstrong Ranch. Located within the northern portion of the city boundaries, the ranch is currently undeveloped and used for cattle grazing. The 320 acres of Armstrong Ranch which are located in Marina are designated in the General Plan as single-family residential and industrial/residential development/professional office use. The remaining 1,500 acres of the Armstrong Ranch are located within the city’s Sphere of Influence (SOI) in unincorporated Monterey County. This adjoining portion is designated in the General Plan as single family residential and parks and open space highway commercial, public grounds and buildings, neighborhood commercial and low-density multiple family land use. The Monterey County General Plan designates the area as permanent grazing.

Located between the Armstrong Ranch and Reservation Road is the 1,395-acre former Fritzsche Army Airfield, now renamed Marina Municipal Airport. The City of Marina received a public benefit conveyance from the U.S. Army of approximately 845.5 acres for public airport use. The remainder of the site is the subject of an economic development conveyance request by the University of California for the Monterey Bay, Education, Science and Technology Center and the UC/NRS Fort Ord Natural Reserve.

South of Reservation Road, land adjacent to the former Fort Ord is developed with single family homes. Commercial land uses are located along Reservation Road and along Del Monte Avenue. Marina State Beach and commercial lodging facilities are located west of State Highway 1.

**Population:** The City of Marina’s total population in 1991 was 30,113, with 44% residing within Fort Ord’s boundary (Monterey County Local Agency Formation Commission, 1991).

**City of Seaside**

**General Characteristics:** The City of Seaside is located in Monterey County near the south end of Monterey Bay, bordered by the cities of Monterey and Del Rey Oaks to the south, Sand City to the west and the former Fort Ord to the east and north (Figure 4.1-3). The city was subdivided in 1890 as a resort and incorporated in 1954. The city encompasses a total area of approximately nine square miles. It is divided into two distinct portions: Seaside proper consists of 2.69 miles, while the former Fort Ord, which comprises 70% of land within Seaside’s city boundaries, consists of 6.44 square miles. (Seaside General Plan Update Program/Preliminary General Plan, November 1993).



### Figure 4.1-3, Generalized Land Use Settings

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*

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Seaside's sphere of influence (SOI) is currently the same as its city limits. The city has submitted an application to the Local Agency Formation Commission (LAFCO) to expand the SOI eastward to include almost all of the former Fort Ord, and westward to include the unincorporated beachfront and 10,000 feet of Monterey Bay. LAFCO has placed a moratorium on all SOI expansion requests related to the former Fort Ord until a final Fort Ord reuse plan is established. (See also discussion below under Local Agency Formation Commission Requests.)

**Existing Land Use:** The current area occupied by Seaside proper is essentially built out. Over 800 acres, or almost 50% of its land, are devoted to residential use, predominantly single-family housing.

Seaside proper is characterized by a wide range of uses including residential, commercial, public, vacant land, and limited industrial/wholesale uses. Of these, residential is the largest single land use, making up 48.4% of all land use. The second largest use of land is right-of-way for streets and the Southern Pacific Railroad, with 28.4% of all use.

Seaside contains 500 feet of ocean frontage. The city's beach area adjacent to Monterey Bay (Del Monte Beach) is approved for visitor serving commercial use, parking and beach access in the Local Coastal Plan (LCP). The State Department of Parks and Recreation has purchased and improved the area adjacent to the water for inclusion in the State Parks System. Other areas covered by the LCP include Roberts Lake and Laguna Grande, both located in the southern part of the city adjacent to Canyon Del Rey and Del Monte Boulevards.

The Central Business District and retail/commercial areas are located in the western part of the city between and adjacent to Del Monte and Fremont boulevards, as well as on the section of Broadway closest to the commercial center along Del Monte Boulevard.

The existing areas adjacent to the former Fort Ord are primarily developed with single-family homes (up to 9.9 units per acre). A retail shopping center is located at the Fremont Boulevard/Military Avenue intersection near State Highway 1. The Mission Memorial Park cemetery, which also includes the Monterey Peninsula Mortuary, is located along Gernerel Jim Moore Boulevard. A few neighborhood parks are also located in the residential areas adjacent to the former Fort Ord.

The amount of vacant land currently available in the city is approximately 53 acres, or 3 percent of the total land within Seaside proper. Of the total, 24.67 acres (46%) are located in residential zones; 23.12 acres (44%) are in commercial zones; and 5.14 acres (ten percent) are in special treatment, or multi-zone areas. As Seaside proper is essentially built out, any new residential growth here will come on the few remaining vacant lots, through redevelopment, or through expansion into former Fort Ord lands.

The Fort Ord land area located within the Seaside city limits includes existing low-density residential areas, four existing schools, office space, two golf courses,



and natural open space areas. Development in the Fort Ord land area following conveyance of the land presents a major opportunity for Seaside to expand residential, commercial and recreational land uses.

**Population:** The 1991 total population within its 9.13 square miles city limits was 39,750, with Seaside proper consisting of 2.69 square miles and 23,344 residents. The Fort Ord portion, comprising 6.44 square miles, had 17,298 residents at the time the announcement was made that the base would close or be downsized (Monterey County Local Agency Formation Commission, 1991).

**County of Monterey**

**General Characteristics:** The County consists of 2,127,400 acres (3,324 square miles), of which 10 percent includes military reservations and 22% is in the Los Padres National Forest and the Ventana Wilderness. Among the prominent geographic features in the county are the Santa Lucia and Gabilan Ranges, the Salinas and Carmel Valleys and 100 miles of California’s central coast (Figure 4.1-3).

The county is divided into eight planning areas. The former Fort Ord is located in the Greater Monterey Peninsula Area Plan (GMPAP), adjacent to the Greater Salinas and Toro planning areas. The GMPAP consists of 140,222 acres and includes seven incorporated cities that constitute 15% of the total acreage. They are Marina, Seaside, Sand City, Del Rey Oaks, Monterey, Pacific Grove, and Carmel. Fort Ord represents 27,954 acres of the total GMPAP area ( Monterey County Peninsula Area Plan, 1984).

**Existing Land Uses:** Public and quasi-public use is the largest category of existing land use in the County’s unincorporated area, accounting for a total of 45,458 acres. The largest components of this land use category are military (primarily Fort Ord), natural resource management (U.S. Bureau of Land Management, portions of Los Padres National Forest and the Salinas River Wildlife Area), recreational/cultural (primarily Jacks Peak Park, Laguna Seca Recreation Area, Garland Ranch Regional Park, Point Lobos State Reserve and various public and private golf courses), transportation (primarily the Monterey Peninsula Airport, which has self-government status under state law, and State Highway 1 and U.S. Highway 101, which link the County north and south), education, and emergency services facilities.

Unincorporated Monterey County includes the coastal zone of approximately 1,050 acres adjacent to the former Fort Ord, extending 4 miles along Monterey Bay.

Vacant/unimproved lands in Monterey County total 41,480 acres, much of which is located in the steeper southern portions of the GMPAP. Lands in this use category have traditionally sustained development pressure, primarily for residential purposes. Agricultural, grazing and rangeland uses total 25,603 acres and are primarily grazing land and range land north of the City of Marina, in the hillside areas north and south of Carmel Valley, and to the east



of Carmel Valley Village. Some row crops are grown north of the City of Marina near the Salinas River and on the floor of the Carmel Valley at the mouth and in the mid-valley area. Agricultural uses in the flatter areas have come under pressure for development of residential, commercial and industrial uses. Grazing land and range land areas have come under development pressure also, primarily for residential purposes.

Residential development in the county totals approximately 5,029 acres, of which 4,576 acres are developed in single-family residential units and 453 acres in multiple units. Most residential development in the unincorporated area is found in the Del Monte Forest, the Carmel Highlands, the Carmel Valley, the Aquajito area, and to a lesser extent, Hidden Hills, Toro Park and Laguna Seca Ranch.

Commercial land uses in the county total 188 acres and include businesses which serve both residents and the large number of tourists who visit the planning area. Most of the major commercial uses in the unincorporated area are located in Carmel Valley.

Industrial uses total 187 acres and include a variety of facilities such as the Dole processing and packaging plants near the Salinas River on State Highway 1 and near Soledad off State Highway 101, the Monterey Regional Waste Management District landfill and the Monterey Regional Water Pollution Control Agency's sewage treatment facility northeast of Marina, the Carmel Sanitary District sewage treatment facility at the mouth of the Carmel Valley, and mineral extraction (sporadic) facilities in the various areas of the County.

Streets, highways and railroads in the GMPAP cover 1,760 acres. Major water bodies in the planning area total 55 acres and are all constructed water storage facilities. Included in this total is a portion of the San Clemente Reservoir. The other facility is the Forest Lake Reservoir in the Del Monte Forest (currently drained).

**Population:** As of January 1991, the county population was 362,800. Of this total, 72% of the population was located in the 12 incorporated cities and 28% in unincorporated areas. The enlisted military population represented seven percent of the total population (California Department of Finance, Demographic Research Unit).

### **Local Agency Formation Commission Requests**

Several cities have submitted requests to expand their Sphere of Influence (SOI) into County lands. LAFCO has a policy of not processing any Fort Ord requests for SOI expansion until a final Fort Ord Reuse Plan is approved and environmental documentation is provided. The SOI expansion requests, shown on Figure 4.1-4 (SOI map) include:

- City of Marina: The City Council approved a request on May 26, 1992 to expand the city's SOI at the eastern boundary of the former Fort Ord and in the dune area west of State Highway 1. This action never reached the status of a formal application due to the LAFCO policy of not processing any Fort Ord requests.



- City of Seaside: In September 1991, the city submitted two separate requests to amend its SOI, with the goal of defining its Fort Ord SOI for general planning purposes. The proposed Seaside SOI boundaries would extend to the dunes area west of State Highway 1 and 10,000 feet into Monterey Bay, as well as east and south of the city’s existing and General Plan SOI. As with all other requests related to the former Fort Ord, the city’s request to LAFCO is on hold, pending completion of the Fort Ord Reuse Plan EIR.
- City of Del Rey Oaks: The city is currently meeting informally with LAFCO officials, the cities of Monterey and Seaside, and its General Plan consultants regarding SOI extension and annexation of Fort Ord Polygons 29a, 31a and 31b.
- City of Monterey: The city passed a resolution in 1983 to expand its SOI to include the Fort Ord planning area between South Boundary Road and Ryan Ranch and is still planning to request SOI expansion and annexation of Fort Ord Polygons 29 b, c, d and e within the next 20 years.

**4.1.1.3 Permitted Range of Land Uses for Fort Ord**

The permitted range of uses for designated land uses at the former Fort Ord is described by land use type on Table 3.2-2 in the Framework for the Reuse Plan. It offers density standards, description of intent and permitted range of uses for each land use category allowed at the former Fort Ord. As shown in the mix of uses included for each land category, the reuse plan encourages a creative approach to planning development by each jurisdiction.

The land Use Element addresses its topic in four major sections: Residential land use, Commercial land use, Recreation/ Open Space land Use, and Institutional Land use. For each section, the Element offers a summary of existing conditions, followed by objectives shared by each jurisdiction with lands on the former Fort Ord (Cities of Marina and Seaside, County of Monterey) and separate policies and programs for each jurisdiction.

The Land Use Element incorporates the permitted range of uses for designated uses at the former Fort Ord as described in Table 3.2-2. This information includes density standards, description of intent and permitted range of uses for each land use category described in the element.

The designation of uses for Fort Ord lands, which follows this system of permitted uses and has been described previously in the Land use framework, resulted in the Reuse Plan’s Land use Concept for the former Fort Ord. The concept is shown by jurisdiction for the City of Marina, Figure 4.1-5, the City of Seaside, Figure 4.1-6, and the County of Monterey, Figure 4.1-7.



## Figure 4.1-4, Sphere of Influence and Annexation Requests

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*



Reuse Plan Elements  
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## Figure 4.1-5, City of Marina Land Use Concept

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*



#### **4.1.1.4 Permitted Development Capacity**

The land Development Capacity is summarized in Table 3.3-1 in the Framework of the Reuse Plan. This table delineates land use capacity for each jurisdiction (Marina, Seaside, and Monterey County) and provides a summary of the acreage and capacity in: 1) number of dwelling units; 2) number of hotel rooms; or 3) amount of square feet of office, industrial, R&D, and retail uses. The table lists the various land uses, including the CSUMB designation and area-wide rights-of-way, and more specific categories for hotels, golf courses, and the Fort Ord Dunes State Park. The development capacity for Marina, Seaside, and Monterey County are detailed for each planning district in Tables 3.8-1, 3.9-1, and 3.10-1 in the framework for the Reuse Plan.

The “Land Use Capacity” is a projected development yield based on anticipated market absorption, land characteristics, and community vision. The capacities indicated are intended to provide a general guide to assist in land resource management and infrastructure commitments and financing. The precise mix of uses is expected to vary in response to market conditions and FORA actions. The aggregate totals provide a “not-to-exceed envelope” of development within the former Fort Ord.

### **4.1.2 Residential Land Use**

#### **4.1.2.1 Summary of Existing Land Use Conditions**

This section provides information about the existing residential land use at the former Fort Ord. It incorporates by reference information from the Land Use Baseline Study of Fort Ord, California (U.S. Army Corps of Engineers, Sacramento District, 1992b).

The existing conditions described in this section refer to the baseline year of 1991.

#### ***Fort Ord***

Existing residential land uses on the former Fort Ord encompass a total of 1,294 acres. They include family and military housing, such as training and temporary personnel barracks, enlisted housing, and officer housing.

#### ***City of Marina***

Fort Ord existing residential areas that are within Marina’s city limits consist of family housing in the Patton Park and Abrams Park areas located in the Main Garrison south of Reservation Road. In Marina’s SOI which extends eastward beyond the city limits, additional family housing is located in the East Garrison. Some troop housing is also located in the city limits.

#### ***City of Seaside***

Fort Ord existing residential land uses within the Seaside city limits are primarily part of the Main Garrison and are identified as Stilwell Park, Hayes Park, Fitch Park, Marshall Park, Sun Bay Apartments and Brostrom Mobilehome Park.



## Figure 4.1-6, City of Seaside Land Use Concept

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*

**County of Monterey**

Monterey County designates all land within Fort Ord boundaries public/quasi-public. The East Garrison and the Frederick Park area of the Main Garrison are the only unincorporated Monterey County areas that are developed with existing residential land uses.

**4.1.2.2 Residential Land Use Objectives**

*Objective A: Establish a range of permissible housing densities for the Fort Ord area.*

The land use designations developed for the Fort Ord Reuse Plan reflect an aggregated average development intensity within which a range of residential prototypes would be appropriate. To provide flexibility and diversity within planning areas or districts, the land use designation sets the range of permissible housing types and an overall maximum development intensity averaged over entire planning areas or districts in the Fort Ord area. The land use designations specifically limit the character of individual projects by addressing the range of appropriate development prototypes.

*Objective B: Ensure compatibility between residential development and surrounding land uses.*

The land use design concept for the former Fort Ord stresses cohesiveness of adjacent land uses. Incompatible uses can disrupt the development process of districts and neighborhoods, be visually inharmonious, and create environmental and safety problems.

*Objective C: Encourage highest and best use of residential land to enhance and maximize the market value of residential development and realize the economic opportunities associated with redevelopment at the former Fort Ord.*

Both the cities of Seaside and Marina have a sufficient supply of low income housing within their existing residential areas. For redevelopment of the former Fort Ord community within their city limits, the jurisdictions intend to provide moderate and above moderate income housing to achieve a better housing supply balance and to maximize the market value of the housing stock.

The market development strategy which underlies the land use concept of the Base Reuse Plan supports the goal of achieving the maximum market value for residential development. The strategy takes into account the types of development that can reasonably be attracted to the former Fort Ord to finance the extension of infrastructure and promote economic development within the region. By accommodating the broadest number of segments of the desirable real estate market during the initial years of Fort Ord redevelopment, this approach is intended to leverage the housing market—including moderate and above-market units—to achieve the following desirable results:

- Enhance the attractiveness of the former Fort Ord as a jobs center;
- Use market support to generate investment capital for infrastructure improvements; and
- Put into place the threshold investments that will carry the vision for the former Fort Ord beyond the 2015 horizon.



## Figure 4.1-7, County of Monterey Land Use Concept

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*

*Objective D: Provide public facilities and services that will support revitalization of existing Army housing and new housing construction on the former Fort Ord.*

The availability of public facilities and services required to support residential development at the former Fort Ord is discussed in detail in associated documents, including the Public Facilities Implementation Plan and the Public Services Plan of the Fort Ord Reuse Plan.

*Objective E: Coordinate the location, intensity and mix of land uses with alternative transportation goals and transportation infrastructure.*

The Fort Ord land use design approach is based on a pedestrian-friendly concept that does not rely solely on the automobile for transportation. Alternative transportation, such buses, bicycling and walking are important components of a transportation system that will reduce the number of cars on the road. Sound environmental planning practices, including alternative transportation measures, are an important element to promote a development pattern that reflects AMBAG's "Livable Communities Initiative." For further discussion, please turn to the Circulation Element of this plan.

The jurisdictions developing the former Fort Ord can encourage alternative transportation by directing high-intensity development along transit lines and promoting a concentrated mix of uses that make it easy for people to walk from place to place. Consolidation of living, working, entertainment, and shopping in mixed-use districts will allow people living and working in the Fort Ord area to depend less on their cars. The land use plan provides for Planned Development Mixed Use in each of the three land use jurisdictions. This designation is intended to encourage the development of pedestrian-oriented community centers that support a wide variety of land uses, including commercial, residential, retail, professional services, and cultural and entertainment activities. Generally, this mixed use will be located near future transit facilities or along transit corridors, and near commercial and employment centers. It serves as a transition from existing developed urban centers and lower density residential and institutional districts.

*Objective F: Balance economic development needs with the needs of the homeless population in the community.*

Base conversion goals offer unique opportunities for affordable housing developers and homeless service providers to obtain surplus property an address the needs of the homeless, in addition to focusing on economic redevelopment. While it cannot be expected that communities resolve homelessness through base conversion, the resources offered by closing bases such as Fort Ord can be used to meet some local homeless needs in the Monterey Bay area.

*Objective G: Improve access for people with disabilities by creating a barrier-free environment.*

Many of the inequities for people with disabilities are defined by the built environment. By setting appropriate physical standards for buildings, community facilities and transportation patterns, jurisdictions can remove unnecessary limits



that restrict the activities and quality of life of many members of the community, including children, elderly people, and people with disabilities.

*Objective H: Provide General Plan consistency between land use and housing elements.*

The Fort Ord Reuse Plan contains housing policies applicable to Fort Ord lands in the residential section of its Land Use Element. Adherence to standards related to issues such as density and housing type standards, relationships to transportation and open space, and others will ensure that residential development at the former Fort Ord will contribute to reuse goals and quality of life.

*Objective I: Provide for Community Design principles and guidelines to ensure quality of life for Fort Ord residents and surrounding communities.*

The reuse of the former Fort Ord offers an opportunity to reinforce the unified vision shared by Monterey Bay jurisdictions and establish a sense of community that will maintain value over time. Establishing high-quality design standards for Fort Ord residential development will help to establish the form and appearance for the area and ensure that the residential features will contribute to community identity, livability, and quality of life for residents of the Fort Ord area and surrounding jurisdictions.

*Objective J: Provide for adequate housing for CSUMB.*

CSUMB is planning to house 80% of its student population and substantial portions of faculty and staff. These housing needs will be met with existing residential projects, core campus student housing, and infill housing in the campus reserve at the eastern end of the campus area.

**4.1.2.3 Residential Land Use Policies and Programs**

***City of Marina***

*Objective A: Establish a range of permissible housing densities for the Fort Ord area.*

**Residential Land Use Policy A-1:** The City of Marina shall provide variable housing densities to ensure development of housing accessible to all economic segments of the community. Residential land uses shall be categorized according to the following densities:

<b><u>Land Use Designation</u></b>	<b><u>Actual Density-Units/Gross Acre</u></b>
SFD Low Density Residential	up to 5 Du/Ac
SFD Medium Density Residential	5 to 10 Du/Ac
MFD High Density Residential	10 to 20 Du/Ac
Residential Infill Opportunities	5 to 10 Du/Ac
Planned Development Mixed Use District	8 to 20 Du/Ac



Development intensities for residential and other land uses in the City of Marina are summarized in Table 3.3-2 in the Framework of the Reuse Plan.

The full range of permitted uses in each Land Use Designation is described in Table 3.4-1 in the Framework of the Reuse Plan.

**Program A-1.1:** Amend the City’s General Plan and Zoning Code to designate former Fort Ord land at the permissible residential densities consistent with the Fort Ord Reuse Plan and appropriate to accommodate the housing types desired for the community.

*Objective B: Ensure compatibility between residential development and surrounding land uses.*

**Residential Land Use Policy B-1:** The City of Marina shall encourage land uses that are compatible with the character of the surrounding districts or neighborhoods and discourage new land use activities which are potential nuisances and/or hazards within and in close proximity to residential areas.

**Program B-2.1:** The City of Marina shall revise zoning ordinance regulations on the types of uses allowed in the city’s districts and neighborhoods, where appropriate, to ensure compatibility of uses in the Fort Ord planning area.

**Program B-2.2:** The City of Marina shall adopt zoning standards for the former Fort Ord lands to achieve compatible land uses, including, but not limited to, buffer zones and vegetative screening.

*Objective C: Encourage highest and best use of residential land to enhance and maximize the market value of residential development and realize the economic opportunities associated with redevelopment at the former Fort Ord.*

**Residential Land Use Policy C-1:** The City of Marina shall provide opportunities for developing market-responsive housing in the Fort Ord planning area.

**Program C-1.1:** The City of Marina shall evaluate the existing residential areas in the Planned Residential District—the Abrams, Preston and Patton housing projects—and determine those areas that are suitable for renovation.

**Program C-1.2:** The City of Marina shall identify, zone, and consider development of “Infill Opportunities” in these residential areas where sites can be developed, which are easily served with existing infrastructure. This infill development will enrich the mix of housing types available by providing additional single-family housing on a range of lot sizes, including small lots (4,000 to 5,000 square foot lots).

**Program C-1.3:** The City of Marina shall prepare one or more specific plans for the Marina Town Center Planning Area in order to provide for appropriate market-responsive housing in the area designated as Planned Development Mixed Use. Housing shall range from single family homes to attached town homes, apartments, and condominiums.



**Program C-1.4:** Development in the UC MBEST Center Cooperative Planning District shall be consistent with the University of California Master Plan for this area, in particular with regard to providing a mixed-use housing component.

*Objective D: Provide public facilities and services that will support revitalization of existing Army housing and new housing construction on the former Fort Ord.*

**Residential Land Use Policy D-1:** The City of Marina shall implement the Public Services and Capital Improvement Program in the Fort Ord Reuse Plan to support residential development.

**Program D-1.1:** The City of Marina shall cooperate with FORA and provide adequate public facilities and services that will support residential revitalization and new housing construction at the former Fort Ord.

*Objective E: Coordinate the location, intensity, and mix of land uses with alternative transportation goals and transportation infrastructure.*

**Residential Land Use Policy E-1:** The City of Marina shall make land use decisions that support transportation alternatives to the automobile and encourage mixed-use projects and the highest-density residential projects along major transit lines and around stations.

**Program E-1.1:** The City of Marina shall prepare one or more specific plans for the Marina Village and Mixed Used Corporate Center districts in the city's Town Center Planning Area which are designated as mixed use areas, in order to support transportation alternatives to the automobile.

**Program E-1.2:** The City of Marina shall encourage CSUMB in the preparation of its master plan to designate high-density residential development near convenience corridors and public transportation routes.

**Program E-1.2:** The City of Marina shall prepare one or more master or specific plans for the UC MBEST Center Cooperative Planning District and incorporate provisions to support transportation alternatives to the automobile.

**Residential Land Use Policy E-2:** The City of Marina shall encourage neighborhood retail and convenience/specialty retail land use in residential neighborhoods.

**Program E-2.1:** The City of Marina shall designate convenience/specialty retail land use on its zoning map and provide standards for development within residential neighborhoods.

**Residential Land Use Policy E-3:** In areas of residential development, the City of Marina shall provide for designation of access routes, street and road rights-of-way, off-street and on-street parking, bike paths and pedestrian walkways.

**Program E-3.1:** The City of Marina shall delineate adequate circulation rights-of-way to and within each residential area by creating circulation rights-of-way plan lines.

**Program E-3.2:** The City of Marina shall prepare pedestrian and bikeway plans and link residential areas to commercial development and public transit.

*Objective F: Balance economic development needs with the needs of the homeless population in the community. The City of Marina shall proactively work with the Coalition of Homeless Service Providers and its member agencies to provide housing related services to the homeless populations which the agencies serve, to successfully integrate such programs into Fort Ord, especially the city’s 12th Street and Abrams Park housing areas.*

**Residential Land Use Policy F-1:** The City of Marina shall strive to meet the needs of the homeless population in its redevelopment of the former Fort Ord, specifically in the city’s Patton Park housing area.

**Program F-1.1:** The City of Marina shall develop guidelines to facilitate and enhance the working relationship between FORA and local homeless representatives.

**Program F-1.2:** The City of Marina shall conduct outreach to homeless service providers and nonprofit low income housing developers to determine homeless needs in the community.

**Program F-1.3** [This program was removed based in the modifications to the Reuse Plan approved by the Board on June 13, 1997.]

*Objective G: Improve access for people with disabilities by creating a barrier-free environment.*

**Residential Land Use Policy G-1:** The City of Marina shall support broad design standards and accessible environments in developing the Fort Ord planning area.

**Program G-1.1:** The City of Marina shall identify focused areas and develop inclusionary zoning to encourage group homes and flexibility in household size and composition.

**Program G-1.2:** The City of Marina shall review all development plans with the goal of making the community more accessible.

**Program G-1.3:** The City of Marina shall inventory those existing public facilities on former Fort Ord lands that warrant reduction in barriers and develop a long-term program to implement reduction in barriers.

*Objective H: Provide General Plan consistency between land use and housing elements.*

**Residential Land Use Policy H-1:** The City of Marina shall incorporate policies in its Housing Element consistent with Fort Ord policies for residential lands.

**Program H-1.1:** The City of Marina shall revise its housing element to incorporate and address the policy direction in this plan, including but not limited to issues regarding additional housing stock, opportunities for affordable housing, and provisions for housing displacement.



## Figure 4.1-8, Reconfigured POM Annex

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*



incorporate and address the policy direction in this plan, including but not limited to issues regarding additional housing stock, opportunities for affordable housing, and provisions for housing displacement.

*Objective I: Provide for Community Design principles and guidelines to ensure quality of life for Fort Ord residents and surrounding communities.*

**Residential Land Use Policy I-1:** The City of Marina shall support FORA in the preparation of regional urban design guidelines, including a scenic corridor design overlay area, to govern the visual quality of areas of regional importance.

**Program I-1.1:** The City of Marina shall prepare design guidelines for implementing development on former Fort Ord lands consistent with the regional urban design guidelines (to be prepared by FORA) and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Program I-1.2:** The City of Marina shall review each development proposal for consistency with the regional urban design guidelines and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Residential Land Use Policy I-2:** The City of Marina shall adhere to the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**City of Seaside**

*Objective A: Establish a range of permissible housing densities for the former Fort Ord area.*

**Residential Land Use Policy A-1:** The City of Seaside shall provide variable housing densities to ensure development of housing accessible to all economic segments of the community. Residential land uses shall be categorized according to the following densities:

<b>Land Use Designation</b>	<b>Actual Density- Units/Gross Acre</b>
SFD Low Density Residential	up to 5 Du/Ac
SFD Medium Density Residential	5 to 10 Du/Ac
MFD High Density Residential	10 to 20 Du/Ac
Residential Infill Opportunities	5 to 10 Du/Ac
Planned Development Mixed Use District	8 to 20 Du/Ac

Development intensities for residential and other land uses in the City of Seaside are summarized on Table 3.3-3 in the Framework of the Reuse Plan.

The full range of permitted uses in each Land Use Designation is described in Table 3.4-1 in the Framework of the Reuse Plan.



**Program A-1.1:** Amend the City’s General Plan and Zoning Code to designate former Fort Ord land at the permissible residential densities consistent with the Fort Ord Reuse Plan and appropriate to accommodate the housing types desired for the community.

*Objective B: Ensure compatibility between residential development and surrounding land uses.*

**Residential Land Use Policy B-1:** The City of Seaside shall encourage land uses that are compatible with the character of the surrounding districts or neighborhoods and discourage new land use activities which are potential nuisances and/or hazards within and in close proximity to residential areas.

**Program B-2.1:** The City of Seaside shall revise zoning ordinance regulations on the types of uses allowed in the city’s districts and neighborhoods, where appropriate, to ensure compatibility of uses in the Fort Ord planning area.

**Program B-2.2:** The City of Seaside shall adopt zoning standards for the former Fort Ord lands to achieve compatible land uses, including, but not limited to, buffer zones and vegetative screening.

*Objective C: Encourage highest and best use of residential land to enhance and maximize the market value of residential development and realize the economic opportunities associated with redevelopment at the former Fort Ord.*

**Residential Land Use Policy C-1:** The City of Seaside shall provide opportunities for developing market-responsive housing in the Fort Ord planning area.

**Program C-1.1:** The City of Seaside shall develop an agreement with the U.S. Army to implement the reconfiguration of the POM Annex community (See Figure 4.1-8).

**Program C-1.2:** The City of Seaside shall zone and consider development of a golf course community in the New Golf Course Community District totaling 3,365 units. The district includes, the existing 297-unit Sun Bay apartment complex on Coe Road and 3,068 new housing units within the remainder of this District. The City of Seaside shall replace the remaining residential stock in the New Golf Course Community District with a range of market-responsive housing. Development of this area is contingent on the reconfiguration of the existing POM Annex so that the Army residential enclave is located totally to the east of North-South Road.

**Program C-1.3:** The City of Seaside shall assist the U.S. Army to reconfigure the POM Annex. The reconfigured POM Annex should include approximately 805 existing units on 344 acres east of General Jim Moore Boulevard and an additional 302 acres of surrounding, vacant land that is intended to be developed for housing to replace the existing POM Annex housing west of North-South Road.

**Program C-1.4:** The City of Seaside shall prepare a specific plan to provide



for market-responsive housing in the University Village District between the CSUMB campus and Gigling Road. This is designated a Planned Development Mixed Use District to encourage a vibrant village with significant retail, personal and business services mixed with housing.

**Program C-1.5:** The City of Seaside shall amend its zoning ordinance to allow new residential development in the Planned Residential Extension Districts that provides a direct extension of the city's existing residential area west of the former Fort Ord properties.

*Objective D: Provide public facilities and services that will support revitalization of existing Army housing and new housing construction on the former Fort Ord.*

**Residential Land Use Policy D-1:** The City of Seaside shall implement the Public Services and Capital Improvement Program in the Fort Ord Reuse Plan to support residential development.

**Program D-1.1:** The City of Seaside shall cooperate with FORA and provide adequate public facilities and services that will support residential revitalization and new housing construction at the former Fort Ord.

*Objective E: Coordinate the location, intensity and mix of land uses with alternative transportation goals and transportation infrastructure.*

**Residential Land Use Policy E-1:** The City of Seaside shall make land use decisions that support transportation alternatives to the automobile and encourage mixed-use projects and the highest-density residential projects along major public transportation routes.

**Program E-1.1:** The City of Seaside shall prepare a specific plan for the University Village mixed-use planning district and incorporate provisions to support transportation alternatives to the automobile.

**Program E-1.2:** The City of Seaside shall encourage CSUMB in the preparation of its master plan to designate the high-density residential development near convenience corridors and public transportation routes.

**Program E-1.3:** The City of Seaside shall encourage the development of an integrated street pattern for new developments which provides linkages to the existing street network and discourages cul-de-sac's or dead-end streets.

**Residential Land Use Policy E-2:** The City of Seaside shall encourage convenience/specialty retail land use in residential neighborhoods.

**Program E-2.1:** The City of Seaside shall designate convenience/specialty retail land use on its zoning map and provide standards for development within residential neighborhoods.

**Residential Land Use Policy E-3:** In areas of residential development, the City of Seaside shall provide for designation of access routes, street and road rights-of-way, off-street and on-street parking, bike paths and pedestrian walkways.



**Program E-3.1:** The City of Seaside shall delineate adequate circulation rights-of-way to and within each residential area by creating circulation rights-of-way plan lines.

**Program E-3.2:** The City of Seaside shall prepare pedestrian and bikeway plans and link residential areas to commercial development and public transit.

*Objective F: Balance economic development needs with the needs of the homeless population in the community.*

**Residential Land Use Policy F-1:** The City of Seaside shall strive to meet the needs of the homeless population in its redevelopment of the former Fort Ord.

**Program F-1.1:** The City of Seaside shall develop guidelines to facilitate and enhance the working relationship between FORA and local homeless representatives.

**Program F-1.2:** The City of Seaside shall conduct outreach to homeless service providers and nonprofit low income housing developers to determine homeless needs in the community.

**Program F-1.3:** The City of Seaside shall support development of a standard format for the contracts between FORA and homeless service providers that must be submitted to the Federal Housing and Urban Development Agency with this reuse plan.

*Objective G: Improve access for people with disabilities by creating a barrier-free environment.*

**Residential Land Use Policy G-1:** The City of Seaside shall support broad design standards and accessible environments in developing the Fort Ord planning area.

**Program G-1.1:** The City of Seaside shall identify focused areas and develop inclusionary zoning to encourage group homes and flexibility in household size and composition.

**Program G-1.2:** The City of Seaside shall review all development plans with the goal of making the community more accessible.

**Program G-1.3:** The City of Seaside shall inventory those existing public facilities on former Fort Ord lands that warrant reduction in barriers and develop a long-term program to implement reduction in barriers.

*Objective H: Provide General Plan consistency between land use and housing elements.*

**Residential Land Use Policy H-1:** The City of Seaside shall incorporate policies in its Housing Element consistent with Fort Ord policies for residential lands.

**Program H-1.1:** The City of Seaside shall revise its housing element to incorporate and address the policy direction in this plan, including but not limited to issues regarding additional housing stock, opportunities for affordable housing, and provisions for housing displacement.



*Objective I: Provide for Community Design principles and guidelines to ensure quality of life for Fort Ord residents and surrounding communities.*

**Residential Land Use Policy I-1:** The City of Seaside shall support FORA in the preparation of regional urban design guidelines, including a scenic corridor design overlay area, to govern the visual quality of areas of regional importance.

**Program I-1.1:** The City of Seaside shall prepare design guidelines for implementing development on former Fort Ord lands consistent with the regional urban design guidelines (to be prepared by FORA) and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Program I-1.2:** The City of Seaside shall review each development proposal for consistency with the regional urban design guidelines and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Residential Land Use Policy I-2:** The City of Seaside shall adhere to the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**County of Monterey**

*Objective A: Establish a range of permissible housing densities for the Fort Ord area.*

**Residential Land Use Policy A-1:** The County of Monterey shall provide variable housing densities to ensure development of housing accessible to all economic segments of the community. Residential land uses shall be categorized according to the following densities:

<b>Land Use Designation</b>	<b>Actual Density-Units/Gross Acre</b>
SFD Low Density Residential	up to 5 Du/Ac
SFD Medium Density Residential	5 to 10 Du/Ac
MFD High Density Residential	10 to 20 Du/Ac
Residential Infill Opportunities	5 to 10 Du/Ac
Planned Development Mixed Use District	8 to 20 Du/Ac

Development intensities for residential and other land uses in the County of Monterey are summarized on Table 3.3-4 in the Framework of the Reuse Plan.

The full range of permitted uses in each Land Use Designation is described in Table 3.4-1 in the Framework of the Reuse Plan.

**Program A-1.1:** Amend the County’s General Plan, Greater Monterey Peninsula Area Plan and Zoning Code to designate the former Fort Ord land at the permissible residential densities consistent with the Fort Ord Reuse Plan and appropriate to accommodate the housing types desired for the community.



**Program A-1.2:** Provide for the appropriate infill residential zoning for CSUMB to expand its housing stock.

*Objective B: Ensure compatibility between residential development and surrounding land uses.*

**Residential Land Use Policy B-1:** The County of Monterey shall encourage land uses that are compatible with the character of the surrounding districts or neighborhoods and discourage new land use activities which are potential nuisances and/or hazards within and in close proximity to residential areas.

**Program B-2.1:** The County of Monterey shall revise zoning ordinance regulations on the types of uses allowed in the county's districts and neighborhoods, where appropriate, to ensure compatibility of uses in the Fort Ord planning area.

**Program B-2.2:** The County of Monterey shall adopt zoning standards for the former Fort Ord lands to achieve compatible land uses, including, but not limited to, buffer zones and vegetative screening.

*Objective C: Encourage highest and best use of residential land to enhance and maximize the market value of residential development and realize the economic opportunities associated with redevelopment at the former Fort Ord.*

**Residential Land Use Policy C-1:** The County of Monterey shall provide opportunities for developing market-responsive housing in the Fort Ord planning area.

**Program C-1.1:** The County of Monterey shall amend the Greater Monterey Peninsula Area Plan, zone and consider development of a significant new residential area in the County Eucalyptus Planning Area at the perimeter of the BLM land. The district is designated as SFD Low Density Residential (1 to 5 Du/Acre), and may be developed with a focal point of a golf course and visitor-serving hotel.

**Program C-1.2:** The County of Monterey shall amend the Greater Monterey Peninsula Area Plan and zone for the development of new housing and other use in the East Garrison Historic District in the County Reservation Road Planning Area to be designated as a Planned Development Mixed Use District. This district may include a residential component, perhaps in a village setting incorporated into the designated historic district, depending on the ultimate location of the POST facilities within the former Fort Ord.

*Objective D: Provide public facilities and services that will support revitalization of existing Army housing and new housing construction on the former Fort Ord.*

**Residential Land Use Policy D-1:** The County of Monterey shall implement the Public Services and Capital Improvement Program in the Fort Ord Reuse Plan to support residential development.

**Program D-1.1:** The County of Monterey shall cooperate with FORA and provide adequate public facilities and services that will support residential revitalization and new housing construction at the former Fort Ord.



*Objective E: Coordinate the location, intensity and mix of land uses with alternative transportation goals and transportation infrastructure.*

**Residential Land Use Policy E-1:** The County of Monterey shall make land use decisions that support transportation alternatives to the automobile and encourage mixed-use projects and the highest-density residential projects along major transit and public transportation routes.

**Program E-1.1:** The County of Monterey shall prepare one or more specific plans for the UC MBEST Center Cooperative Planning District.

**Program E-1.2:** The County of Monterey shall prepare one or more specific plans for the East Garrison District and incorporate provisions to support transportation alternatives to the automobile.

**Program E-1.3:** The County of Monterey shall encourage the development of an integrated street pattern for new developments which provides linkages to the existing street network and discourages cul-de-sac's or dead-end streets.

**Residential Land Use Policy E-2:** The County of Monterey shall encourage convenience/specialty retail land use in residential neighborhoods.

**Program E-2.1:** The County of Monterey shall designate convenience/specialty retail land use on its zoning map and provide standards for development within residential neighborhoods.

**Residential Land Use Policy E-3:** In areas of residential development, the County of Monterey shall provide for designation of access routes, street and road rights-of-way, off-street and on-street parking, bike paths and pedestrian walkways.

**Program E-3.1:** The County of Monterey shall delineate adequate circulation rights-of-way to and within each residential area by creating circulation rights-of-way plan lines.

**Program E-3.2:** The County of Monterey shall prepare pedestrian and bikeway plans and link residential areas to commercial development and public transit.

*Objective F: Balance economic development needs with the needs of the homeless population in the community.*

**Residential Land Use Policy F-1:** The County of Monterey shall strive to meet the needs of the homeless population in its redevelopment of the former Fort Ord.

**Program F-1.1:** The County of Monterey shall develop guidelines to facilitate and enhance the working relationship between FORA and local homeless representatives.

**Program F-1.2:** The County of Monterey shall conduct outreach to homeless service providers and nonprofit low income housing developers to determine homeless needs in the community.



**Program F-1.3:** The County of Monterey shall support development of a standard format for the contracts between FORA and homeless service providers that must be submitted to the Federal Housing and Urban Development Agency with this reuse plan.

**Program F-1.4:** All properties under Title V of the McKinney Act shall be considered to be legal non-conforming uses, and shall be subject to an inspection by the building inspector subject to Health and Safety Codes.

*Objective G: Improve access for people with disabilities by creating a barrier-free environment.*

**Residential Land Use Policy G-1:** The County of Monterey shall support broad design standards and accessible environments in developing the Fort Ord planning area.

**Program G-1.1:** The County of Monterey shall identify focused areas and develop inclusionary zoning to encourage group homes and flexibility in household size and composition.

**Program G-1.2:** The County of Monterey shall review all development plans with the goal of making the community more accessible.

**Program G-1.3:** The County of Monterey shall inventory those existing public facilities on former Fort Ord lands that warrant reduction in barriers and develop a long-term program to implement reduction in barriers.

*Objective H: Provide General Plan consistency between land use and housing elements.*

**Residential Land Use Policy H-1:** The County of Monterey shall incorporate policies in its Housing Framework consistent with Fort Ord policies for residential lands.

**Program H-1.1:** The County of Monterey shall revise its housing element to incorporate and address the policy direction in this plan, including but not limited to issues regarding additional housing stock, opportunities for affordable housing, and provisions for housing displacement.

*Objective I: Provide for Community Design principles and guidelines to ensure quality of life for Fort Ord residents and surrounding communities.*

**Residential Land Use Policy I-1:** The County of Monterey shall adhere to the Community Design principles of the Fort Ord Reuse Plan Design Framework.

**Program I-1.1:** The County of Monterey shall prepare design guidelines for implementing development on former Fort Ord lands consistent with the Community Design Element of the Reuse Plan.

**Program I-1.2:** The County of Monterey shall review each development proposal for consistency with the Community Design principles and the County's design guidelines.

*Objective J: Provide for adequate housing for CSUMB.*

**Residential Land Use Policy J-1:** The County shall coordinate with CSUMB to provide for maintenance of existing housing and infill of new housing.

**Program J-1.1:** The County shall amend the Monterey Peninsula Area Plan and provide zoning for appropriate housing consistent with CSUMB master plan.

**4.1.3 Commercial Land Use**

**4.1.3.1 Summary of Existing Conditions**

This section incorporates by reference information from the Land Use Baseline Study of Fort Ord, California (U.S. Army Corps of Engineers, Sacramento District, 1992b), the Environmental Impact Statement for Fort Ord Disposal and Reuse (U.S. Army Corps of Engineers, Sacramento District, June 1993), and the Supplemental Environmental Impact Statement (U.S. Army Corps of Engineers, Sacramento District, Dec. 1995). These documents are available at the public information repository established at the Seaside Branch Library.

The existing conditions described in this section refer to the baseline year of 1991.

**Fort Ord:** Existing Local Services/Commercial Areas land use category encompasses a total area of 34 acres. It provides retail or other commercial services, such as gas stations, mini-markets, and fast food facilities.

**City of Marina:** There are no existing commercial land uses located within the Marina city limits of the former Fort Ord.

**City of Seaside:** Existing Local Services/Commercial land uses associated with the POM Annex residential use are located within the Seaside city limits of the former Fort Ord.

**County of Monterey:** The County designates all land within Fort Ord boundaries public/quasi-public. There are no existing commercial land uses located within the Monterey County limits of the former Fort Ord.

**4.1.3.2 Commercial Land Use Objectives**

*Objective A: Designate sufficient area for a variety of commercial centers to meet the retail and business needs of the Fort Ord community.*

The Land Use Concept for the Fort Ord Reuse Plan provides for 14 million square feet of ultimate commercial development. Of this total, the Business Park/Light Industrial/Office/Research and Development use receives about 12 million square feet, while 2 million is allocated to the Retail use category. Almost 5 million square feet are scheduled to be allocated by the year 2015, approximately 3.9 million square feet for Business Park/Light Industrial/Office/R&D, and 1.1 million for Retail.



The following typical development intensities have been allocated to commercial uses at the former Fort Ord:

**Light Industrial/Business Park:** permitted floor area ratio (FAR) of .20, some areas slightly lower (.13 to .15 FAR) to account for special site conditions. The Land Use Concept accommodates numerous locations at the former Fort Ord that would be attractive to this market. They include:

- Marina Town Center Planning Area: along State Highway 1 and adjacent to CSUMB;
- Marina Airport Planning Area: UC MBEST Center and Marina Airport Business Park;
- County South Gate Planning Area: Adjacent to planned hotel and golf course development;
- County York Road Planning Area: Extension of existing Ryan Ranch development; and
- County Reservation Road Planning Area: UC MBEST Center and East Garrison.

**Office/R&D:** Permitted FAR of .25, some specific market segments or strategic locations higher (to .35 FAR) because they may be able to attract more intensive development. Numerous locations at the former Fort Ord would be attractive to the office/R&D market. The Reuse Plan's Land Use Concept accommodates them as follows:

- Marina Town Center Planning Area: Frontage along State Highway 1, University Office Park and mixed use village adjacent to CSUMB;
- Marina Airport Planning Area: UC MBEST Center Cooperative Planning District
- County South Gate Planning Area: Adjacent to hotel and golf course development;
- County York Road Planning Area: Extension of existing Ryan Ranch development; and
- County Reservation Road Planning Area: UC MBEST Center and East Garrison.

**Retail and Service Centers:** Permitted FAR of .25. The regional and neighborhood retail uses at the former Fort Ord are primarily located in the planning areas surrounding the western end of the CSUMB campus:

- Marina Town Center Planning Area: mixed use corporate center and Village;



- Seaside University Planning Area: Gateway Regional Entertainment District and University Village; and
- Seaside Residential Planning Area: Planned Residential Extension Districts.
- County South Gate Area: Adjacent to planned hotel and golf course development.

Convenience retail and specialty sites—a total of 10—will be encouraged in a more dispersed pattern to support the residential development pattern on former Fort Ord lands and to reduce vehicle trips.

*Objective B: Establish visitor-serving hotel and golf course designations within suitable former Fort Ord land.*

Hotels and golf courses are located in the Reuse Plan by specific “hotel and golf course opportunity sites.” Appropriate size and character of each facility will be based on the setting. Since there are sufficient land resources to accommodate the distribution of hotel rooms in the Ultimate Plan, hotel buildings at the former Fort Ord should stay within a low-rise configuration. It is anticipated that most new hotel sites should be associated with a golf course to enhance the operating performance of this commercial land use.

The total Fort Ord Visitor Serving program provides 139 acres for hotel sites to accommodate 1,790 rooms, and 678 acres of golf opportunity sites.

*Objective C: Ensure that various types of commercial land use categories are balanced, and that business and industry enhance employment opportunities in and self-sufficiency of Fort Ord communities.*

Planning for reuse of the former military base allows local jurisdictions to create a community that is largely self-contained, a place where residents can live, work, do business, shop, and enjoy recreational facilities. The commercial activities should be allocated across the Fort Ord area to bring about and maintain this balance.

The economic objectives for Fort Ord base reuse address the need for balanced growth and call for creating a setting which is conducive to long-term balanced economic and employment growth and the self-sufficiency of local communities (FORA Reuse Plan Alternatives Analysis).

*Objective D: Encourage commercial development in close proximity to major residential areas and transportation routes.*

Allowing for mixed-use development at the former Fort Ord by combining compatible land uses, such as shops, offices and housing, to locate closer together, will help decrease travel distances, increase transit ridership, walking and biking, and ultimately reduce the vehicle emissions associated with various types of land uses.



The commercial land use strategy for Fort Ord base reuse locates commercial activity near residential areas. It encourages convenience retail and services in a dispersed pattern to support the residential development pattern. The Convenience and Specialty Retail designation allows the distribution of commercial uses, establishing small scale centers that can meet the needs of residential districts. Uses allowed within this category, in addition to convenience and specialty retail, include restaurants and personal services, promoting additional linkage between residential and commercial development. This strategy will help reduce local vehicular trips and trip lengths, which in turn will lead to fewer air quality impacts from Fort Ord development.

A mix of commercial and residential uses is further encouraged by designating mixed-use districts that will allow people to both live and work in the Fort Ord area and therefore to depend less on their cars. The land use concept provides for Planned Development Mixed Use in each of the three land use jurisdictions. This designation is intended to encourage the development of pedestrian-oriented community centers that support a wide variety of commercial, residential, retail, professional services, and cultural and entertainment activities. Generally, this mixed use will be located near future transit facilities or along transit corridors, and near commercial and employment centers.

*Objective E: Provide for adequate access to commercial developments.*

The proposed base reuse circulation system is designed to accommodate and enhance commercial growth and expansion at the former Fort Ord. For the regional and neighborhood retail uses, primarily located around the western end of the CSUMB campus, approximately 20% of the land area is reserved for “local-serving” roads. The regional retail centers designated in the cities of Seaside and Marina are located along State Highway 1 frontage at the Main Gate and 12th Street interchanges to provide areawide access and visibility. Convenience retail and services will be placed in a dispersed pattern throughout the residential development areas on the former Fort Ord and will be accessible via local roads, bike paths and pedestrian trails.

Retail and services are generally served with surface parking in a combination of off-street and on-street locations.

(For further discussion of the proposed Fort Ord transportation system, please refer to the Plan’s Section 4.2, Circulation Element.)

*Objective F: Provide for Community Design principles and guidelines to ensure quality of life for employees and residents of Fort Ord and the surrounding communities.*

Ensuring high-quality design for Fort Ord commercial development will help to establish the form and appearance for the area and ensure that the commercial features will contribute to community identity, livability, and quality of life for residents of the Fort Ord area and surrounding jurisdictions.

(For further discussion of this topic, please refer to Section 3.1 Community Design Vision.)



**4.1.3.3 Commercial Land Use Policies and Programs**

**City of Marina**

*Objective A: Designate sufficient area for a variety of commercial centers to meet the retail and business needs of the Fort Ord community.*

**Commercial Land Use Policy A-1:** The City of Marina shall allocate land in commercial and office categories adequate to provide goods and services for the needs of its citizens, other Fort Ord jurisdictions and their trade areas. Commercial land uses shall be designated as follows:

- **Business Park/Light Industrial**
  - Marina Municipal Airport District (Polygons 1a, 1f):  
60 acres, 0.13 FAR, 340,000 square feet
  - Light Industrial/Technology Center (Polygons 1a, 1f):  
48.37 acres, .20 FAR, 421,399 square feet
  - North Airport Lt. Ind./Technology District (Polygon 1c)  
207 acres, .20 FAR, 1,807,304 square feet
- **Office/R&D**
  - Mixed Use Corporate Center (Polygons 2a, 2b)  
53.68 acres, .35 FAR, 818,405 square feet
  - Marina Village District (Polygons 2b/c/d/g, 3)  
2 acres, .35 FAR, 30,492 square feet
  - University Office Park/R&D District  
64.65 acres, .20 FAR, 563,231 square feet
- **Regional Retail**
  - Mixed Use Corporate Center (Polygons 2a, 2b)  
30 acres, .25 FAR, 326,700 square feet
- **Neighborhood Retail**
  - Planned Residential District (Polygons 2a, 4, 4a, 5b/c)  
17.25 acres, .25 FAR, 187,853 square feet
  - Mixed Use Corporate Center (Polygons 2a, 2b)  
9 acres, .35 FAR, 98,010 square feet



- **Convenience/Specialty Retail**

Planned Residential District (Polygons 2a, 4, 4a, 5b/c)

1 acre, .25 FAR, 10,890 square feet

Civic/Mixed Use District (Polygon 5a)

1 acre, .25 FAR, 10,890 square feet

UC MBEST Center Cooperative Planning District (Polygon 7c)

1 acre, .25 FAR, 10,890 square feet

Marina Village District (Polygons 2b/c/d/g, 3)

7 acres, .25 FAR, 76,230 square feet

**Program A-1.1:** Amend the City’s General Plan and Zoning Code to designate former Fort Ord land at the permissible commercial densities consistent with the Fort Ord Reuse Plan and appropriate to accommodate the commercial activities desired for the community.

*Objective B: Establish visitor-serving hotel and golf course designations within suitable former Fort Ord land.*

**Commercial Land Use Policy B-1:** The City of Marina shall allocate land in the visitor serving category to promote development of hotel and resort uses, along with associated commercial recreation uses such as golf courses. Visitor-serving uses shall be designated as follows:

- UC MBEST Center Cooperative Planning District (Polygon 7c): Hotel Opportunity Site, 10 acres, 150 rooms.
- North Airport Visitor-Serving District (Polygon 1c): Hotel Opportunity Site, 15 acres, 200 rooms; Golf Course Opportunity Site, 184.67 acres.

**Program B-1.1:** Amend the City’s General Plan and Zoning Code to designate visitor-serving uses at the allowable densities consistent with the Fort Ord Reuse Plan and appropriate to accommodate the commercial activities desired for the community.

**Commercial Land Use Policy B-2:** The City of Marina shall not include nor allow card rooms or casinos for gambling as acceptable land uses on the former Fort Ord.

**Program B-2.1:** The City of Marina shall amend the City’s General Plan and Zoning Code to prohibit card rooms or casinos as or conditionally permitted land uses on the former Fort Ord.

**Commercial Land Use Policy B-3:** The City of Marina shall prepare design guidelines for implementing hotel development on former Fort Ord lands consistent with the regional urban design guidelines (to be prepared by FORA) and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Program B-3.1:** The City of Marina shall review each hotel proposal for consistency with the regional urban design guidelines and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Objective C:** Ensure that various types of commercial land use categories are balanced, and that business and industry enhance employment opportunities in and self-sufficiency of Fort Ord communities.

**Commercial Land Use Policy C-1:** The City of Marina shall encourage a strong and stable source of city revenues by providing a balance of commercial land use types on its former Fort Ord land, while preserving the area’s community character.

**Program C-1.1:** The City of Marina shall amend its zoning map to provide for commercial land use types and densities consistent with the Land Use Concept in the Fort Ord Reuse Plan in order to encourage employment opportunities and self-sufficiency.

*Objective D: Encourage commercial development in close proximity to major residential areas and transportation routes.*

**Commercial Land Use Policy D-1:** The City of Marina shall allow a mix of residential and commercial uses to decrease travel distances, encourage walking and biking and help increase transit ridership.

**Program D-1.1:** The City of Marina shall allow for all types and a balance of commercial designations in the following Planned Development Mixed Use Districts:

- UC MBEST Center Cooperative Planning District
- Del Monte Mixed Use District
- Mixed Use Corporate Center District
- Marina Village District

**Program D-1.2:** The City of Marina shall designate convenience/specialty retail land use on its zoning map and provide textual (and not graphic) standards for development within residential neighborhoods.

*Objective E: Provide for adequate access to commercial developments.*

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

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



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

**Program E-2.1:** The City of Marina shall delineate adequate circulation rights-of-way to and within each commercial area by creating circulation right-of-way plan lines.

**Program E-2.2:** The City of Marina shall prepare pedestrian and bikeway plans and link commercial development to residential areas and public transit.

**Program E-2.3:** The City of Marina shall preserve sufficient land at the former Fort Ord for right-of-ways to serve long-range commercial build-out.

*Objective F: Provide for Community Design principles and guidelines for commercial development at the former Fort Ord.*

**Commercial Land Use Policy F-1:** The City of Marina shall support FORA in the preparation of regional urban design guidelines, including a scenic corridor design overlay area, to govern the visual quality of areas of regional importance.

**Commercial Land Use Policy F-2:** The City of Marina shall adhere to the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework for commercial development at the former Fort Ord.

**Program F-1.1:** The City of Marina shall prepare design guidelines for implementing commercial development on former Fort Ord lands consistent with the regional urban design guidelines (to be prepared by FORA) and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Program F-1.2:** The City of Marina shall review each commercial development proposal for consistency with the regional urban design guidelines and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**City of Seaside**

*Objective A: Designate sufficient area for a variety of commercial centers to meet the retail and business needs of the Fort Ord community.*

**Commercial Land Use Policy A-1:** The City of Seaside shall allocate land in commercial and office categories adequate to provide goods and services for the needs of its citizens, other Fort Ord jurisdictions and their trade areas. Commercial land use shall be designated as follows:

- **Regional Retail**

Gateway Regional Entertainment District (Polygon 15)  
43.78 acres, .25 FAR, 476,764 square feet

- **Neighborhood Retail**  
 University Village District (Polygons 18, 20e, 20h)  
 27.85 acres, .25 FAR, 303,287 square feet  
  
 Planned Residential Extension District (Polygon 23)  
 26.05 acres, .25 FAR, 283,685 square feet
- **Convenience/Specialty Retail**  
 University Village District (Polygons 18, 20e, 20h)  
 4 acres, .25 FAR, 43,560 square feet

**Program A-1.1:** Amend the City’s General Plan and Zoning Code to designate former Fort Ord land at the permissible commercial densities consistent with the Fort Ord Reuse Plan and appropriate to accommodate the commercial activities desired for the community.

*Objective B: Establish visitor-serving hotel and golf course designations within suitable former Fort Ord land.*

**Commercial Land Use Policy B-1:** The City of Seaside shall allocate land in the visitor serving category to promote development of hotel and resort uses, along with associated commercial recreation uses such as golf courses. Visitor-serving uses shall be designated as follows:

- Visitor-Serving Hotels and Golf Courses (Polygon 22): Hotel Opportunity Site, approximately 25 acres, 800 rooms; 36-Hole Golf Course Site, 350.14 acres.

**Program B-1.1:** Amend the City’s General Plan and Zoning Code to designate visitor-serving uses at the allowable densities consistent with the Fort Ord Reuse Plan and appropriate to accommodate the commercial activities desired for the community.

**Commercial Land Use Policy B-2:** The City of Seaside shall not include nor allow card rooms or casinos for gambling as acceptable land uses on the former Fort Ord.

**Program B-2.1:** The City of Seaside shall amend the City’s General Plan and Zoning Code to prohibit card rooms or casinos as permitted or conditionally permitted land uses on the former Fort Ord.

**Commercial Land Use Policy B-3:** The City of Seaside shall prepare design guidelines for implementing hotel development on former Fort Ord lands consistent with the regional urban design guidelines (to be prepared by FORA) and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.



**Program B-3.1:** The City of Seaside shall review each hotel proposal for consistency with the regional urban design guidelines and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

*Objective C: Ensure that various types of commercial land use categories are balanced, and that business and industry enhance employment opportunities in and self-sufficiency of Fort Ord communities.*

**Commercial Land Use Policy C-1:** The City of Seaside shall encourage a strong and stable source of city revenues by providing a balance of commercial land use types on its former Fort Ord land, while preserving the area's community character.

**Program C-1.1:** The City of Seaside shall amend its zoning map to provide for commercial land use types and densities consistent with the Land Use Concept in the Fort Ord Reuse Plan in order to encourage employment opportunities and self-sufficiency.

*Objective D: Encourage commercial development in close proximity to major residential areas and transportation routes.*

**Commercial Land Use Policy D-1:** The City of Seaside shall allow a mix of residential and commercial uses to decrease travel distances, encourage walking and biking and help increase transit ridership.

**Program D-1.1:** The City of Seaside shall allow for a balance of neighborhood and convenience commercial designations in the University Village Planned Development Mixed Use District to serve the CSUMB population and Community Park in Polygon 18.

**Program D-1.2:** The City of Seaside shall designate convenience/specialty retail land use on its zoning map and provide textual (and not graphic) standards for development within residential neighborhoods.

*Objective E: Provide for adequate access to commercial developments.*

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

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

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



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

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

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

*Objective F: Provide for Community Design principles and guidelines for commercial development at the former Fort Ord.*

**Commercial Land Use Policy F-1:** The City of Seaside shall support FORA in the preparation of regional urban design guidelines, including a scenic corridor design overlay area, to govern the visual quality of areas of regional importance.

**Commercial Land Use Policy F-2:** The City of Seaside shall adhere to the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework for commercial development at the former Fort Ord.

**Program F-1.1:** The City of Seaside shall prepare design guidelines for implementing commercial development on former Fort Ord lands consistent with the regional urban design guidelines (to be prepared by FORA) and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Program F-1.2:** The City of Seaside shall review each commercial development proposal for consistency with the regional urban design guidelines and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**County of Monterey**

*Objective A: Designate sufficient area for a variety of commercial centers to meet the retail and business needs of the Fort Ord community.*

**Commercial Land Use Policy A-1:** The County of Monterey shall allocate land in commercial and office categories adequate to provide goods and services for the needs of its citizens, other Fort Ord jurisdictions and their trade areas. Commercial land use shall be designated as follows:

- **Business Park/Light Industrial**

East Garrison District (Polygon 11b):  
70 acres, 0.2 FAR, 609,840 square feet

South Gate Planning Area (Polygons 29a, 31a, and 31b):  
48 acres; .20 FAR; 415,127 square feet

York Road Planning Area (Polygons 29b, and 29d):  
147 acres; .06 FAR; 413,000 square feet



- **Office/R&D**
  - UC MBEST Center Cooperative Planning District  
(Polygons 6a, 9b)  
30.15 acres, .35 FAR, 459,667 square feet  
267.47 acres, .27 FAR, 3,192,372 square feet
  - East Garrison District (Polygon 11b)  
25 acres, .20 FAR, 217,800 square feet
  
- **Convenience/Specialty Retail**
  - East Garrison District (Polygon 11b)  
5 acres, 54,461 square feet
  - Residential/Recreational District (Polygon 19a, 19b)  
1 acre, 10,890 square feet
  - County Recreation/Habitat District (Polygon 8a)  
1 acre, 10,890 square feet
  - County Recreation District (Polygon 17a)  
1 acre, 10,890 square feet
  - South Gate Planning Area (Polygons 29a, 31a, and 31b):  
5 acres; .14 FAR; 30,000 square feet

**Program A-1.1:** Amend the County’s General Plan and Zoning Code to designate former Fort Ord land at the permissible commercial densities consistent with the Fort Ord Reuse Plan and appropriate to accommodate the commercial activities desired for the community.

*Objective B: Establish visitor-serving hotel and golf course designations within suitable former Fort Ord land.*

**Commercial Land Use Policy B-1:** The County of Monterey shall allocate land in the visitor serving category to promote development of hotel and resort uses, along with associated commercial recreation uses such as golf courses. Visitor-serving uses shall be designated as follows:

- Residential/Recreational District (Polygons 19a, 21a/b/c): Hotel Opportunity Site, 15 acres, 300 rooms; 18-Hole Golf Course Opportunity Site, 179 acres.
- Visitor-Serving Hotel/Golf Course District (Polygon 29a): Hotel Opportunity Site, 15 acres, 300 rooms; 18-Hole Golf Course Opportunity Site, 149.05 acres.



**Program B-1.1:** Amend the County’s General Plan and Zoning Code to designate visitor-serving uses at the allowable densities consistent with the Fort Ord Reuse Plan and appropriate to accommodate the commercial activities desired for the community.

**Commercial Land Use Policy B-2:** The County of Monterey shall not include nor allow card rooms or casinos for gambling as acceptable land uses on the former Fort Ord.

**Program B-2.1:** The County of Monterey shall amend its General Plan and Zoning Code to prohibit card rooms or casinos as permitted or conditionally permitted land uses on the former Fort Ord.

**Commercial Land Use Policy B-3:** The County of Monterey shall prepare design guidelines for implementing hotel development on the former Fort Ord lands consistent with the regional urban design guidelines (to be prepared by FORA) and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Program B-3.1:** The County of Monterey shall review each hotel proposal for consistency with the regional urban design guidelines and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

*Objective C: Ensure that various types of commercial land use categories are balanced, and that business and industry enhance employment opportunities in and self-sufficiency of Fort Ord communities.*

**Commercial Land Use Policy C-1:** The County of Monterey shall encourage a strong and stable source of county revenues by providing a balance of commercial land use types on its former Fort Ord land, while preserving the area’s community character.

**Program C-1.1:** The County of Monterey shall amend its zoning map to provide for commercial land use types and densities consistent with the Land Use Concept in the Fort Ord Reuse Plan in order to encourage employment opportunities and self-sufficiency.

*Objective D: Encourage commercial development in close proximity to major residential areas and transportation routes.*

**Commercial Land Use Policy D-1:** The County of Monterey shall allow a mix of residential and commercial uses to decrease travel distances, encourage walking and biking and help increase transit ridership.

**Program D-1.1:** The County of Monterey shall allow for convenience commercial designations in the following Planned Development Mixed Use Districts:

- UC MBEST Center Cooperative Planning District
- East Garrison District



**Program D-1.2:** The County of Monterey shall designate convenience/specialty retail land use on its zoning map and provide textual (and not graphic) standards for development within residential neighborhoods.

*Objective E: Provide for adequate access to commercial developments.*

**Commercial Land Use Policy E-1:** The County of Monterey shall coordinate the location and intensity of commercial areas at the former Fort Ord with transportation resources and in a manner which offers convenient access.

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

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

**Program E-2.1:** The County of Monterey shall delineate adequate circulation rights-of-way to and within each commercial area by creating circulation rights-of-way plan lines.

**Program E-2.2:** The County of Monterey shall prepare pedestrian and bikeway plans and link residential areas to commercial development to residential areas and public transit.

**Program E-2.3:** The County of Monterey shall preserve sufficient land at the former Fort Ord for right-of-ways to serve long-range commercial build-out.

*Objective F: Provide for Community Design principles and guidelines for commercial development at the former Fort Ord.*

**Commercial Land Use Policy F-1:** The County of Monterey shall support FORA in the preparation of regional urban design guidelines, including a scenic corridor design overlay area, to govern the visual quality of areas of regional importance.

**Commercial Land Use Policy F-2:** The County of Monterey shall adhere to the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework for commercial development at the former Fort Ord.

**Program F-1.1:** The County of Monterey shall prepare design guidelines for implementing commercial development on former Fort Ord lands consistent with the regional urban design guidelines (to be prepared by FORA) and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Program F-1.2:** The County of Monterey shall review each commercial development proposal for consistency with the regional urban design guidelines and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

## 4.1.4 Recreation/Open Space Land Use

### 4.1.4.1 Summary of Existing Conditions

#### ***Fort Ord***

Existing recreational uses of open space at the former Fort Ord include two golf courses and a club house, baseball diamonds, tennis courts, and playgrounds. Training areas are also part of this designation and include a central track and field, a stadium, and a recreation complex. The combined land use category of Open Space/Training areas in the developed area of the former Fort Ord covers a total of 837 acres. In the undeveloped areas, this land use constitutes the large inland area of 22,576 acres left primarily in its natural state without the development of facilities. Uses here include the training/fire range for advanced military training operations, recreational areas (i.e. hunting, fishing and camping), and land leased to local farmers for livestock grazing.

Over 16,000 acres in the interior of the former Fort Ord are dedicated as a Natural Resource Management Area to be held and managed for that purpose by the Bureau of Land Management. BLM is obligated to specific management activities through the adopted Habitat Management Plan (HMP) and is taking a leading role in the Coordinated Resource Management and Planning Program (CRMP).

#### ***City of Marina***

The Fort Ord area within the Marina city limits includes several Open Space/Training areas, including the Equestrian Center, recreational facilities, and open space areas around the Marina Municipal Airport. The city's SOI includes the East Garrison and encompasses some training areas there.

#### ***City of Seaside***

Open Space/Training areas within the Seaside city limits include the Black Horse and Bayonet championship golf courses.

#### ***County of Monterey***

Unincorporated Monterey County includes the coastal zone of approximately 1,050 acres, extending 4 miles along Monterey Bay. The beach front property was used primarily for military training operations and open space. The county area also includes the large inland undeveloped area, which was used for the inland training/fire range for advanced military training operations, recreational areas (i.e. hunting, fishing and camping), and land leased to local farmers for livestock grazing.



#### **4.1.4.2 Recreation/Open Space Land Use Objectives**

*Objective A: Encourage land uses that respect, preserve and enhance the natural resources of Fort Ord.*

The former Fort Ord is located in a diverse and scenic natural environment. From coastal strand and dune areas to maritime chaparral and oak woodlands, the area offers a broad range of natural features. Land use and design policies can encourage development that enhances the beauty of the natural environment by carefully distributing building intensity and land uses. Fort Ord jurisdictions can preserve the environment by encouraging project design that is responsive to natural features, such as plant and animal habitats.

For further discussion of issues related to Fort Ord’s natural environment, please turn to the elements addressing Recreation and Open Space, and Conservation .

*Objective B: Use open space as a land use link and buffer.*

Although open space exists in contiguous areas at the former Fort Ord, it will also serve an important purpose between various other existing and planned land uses. In this context, open space creates a vital connectivity with the natural resources and open space areas elsewhere and enhances the unique character of the Fort Ord community. Preservation of these “ribbons” of open space areas will be an important consideration in land use planning for the base.

*Objective C: Reserve sufficient lands for regional, community and neighborhood parks and recreation facilities in the Fort Ord area and adjacent communities.*

The abundance of open space resources at the former Fort Ord allows the jurisdictions involved in reuse planning to provide for ample parks and recreation uses as development strategies are considered for the area. The Fort Ord land use strategy promotes the compatible recreational use of diverse open space and recreational resources here to enhance the quality of life for residents, students and the work force within FORA boundaries and in the surrounding communities. These special resources will also contribute to the diversity of the tourist economy of the Monterey Peninsula.

The Open Space/Recreation designation on the Reuse land use plan has been applied to all planned parkland, which will be publicly owned, including Fort Ord Dunes State Park. In certain cases it has been applied to encourage the development of commercial recreation opportunities such as equestrian centers or golf courses. Allowed uses within the designation include convenience retail, commercial recreation such as equestrian centers/trails and golf courses, public amphitheaters, and habitat management.

The Open Space program for the Reuse Plan designates 1,952 acres for park use.

*Objective D: Retain open space to enhance the appearance of special areas that serve as primary gateways to the Fort Ord area.*



Gateways are points of entry into and embarkation from a community. When entering a community, gateways signify a sense of arrival and help to establish a sense of place. The former Fort Ord Army Base had well-defined gateways at major roadways to secure the base. Because there has been continued usage and significance of these existing gateways, maintaining their continuity to signify entry into the Fort Ord community is a logical progression in the conversion of the base.

The most significant gateway into the former Fort Ord is the main gate area, at State Highway 1 and Lightfighter Drive. Secondary entries include the 12th Street entry area at State Highway 1, and several other entries at Del Monte Ave., General Jim Moore Boulevard, and Reservation Road.

*Objective E: Coordinate open space and recreation land use in Monterey County with other affected agencies at the former Fort Ord, such as the Bureau of Land Management, the California Department of State Parks and Recreation, and the University of California.*

The County of Monterey lands at the former Fort Ord contain several large open space areas that need special management and coordination with other agencies.

*Objective F: Preserve and protect the Habitat Management Area set aside at the former Fort Ord.*

For a detailed discussion of the Habitat Management area and Plan, as well as related goals, objectives, policies and programs, please turn to Section 4.4 of this Reuse Plan.

**4.1.4.3 Recreation/Open Space Land Use Policies and Programs**

**City of Marina**

*Objective A: Encourage land uses that respect, preserve and enhance natural resources and open space at the former Fort Ord.*

**Recreation/Open Space Land Use Policy A-1:** The City of Marina shall protect irreplaceable natural resources and open space at former Fort Ord.

**Program A-1.1:** The City of Marina shall identify natural resources and open space, and incorporate it into its General Plan and zoning designations.

**Recreation/Open Space Land Use Policy A-2:** The City of Marina shall encourage the provision of public open space lands as part of all types of development including residential, commercial and institutional.

**Program A-2.1:** As part of review of development projects, the City of Marina shall evaluate and provide for the need for public open space.

*Objective B: Use open space as a land use link and buffer.*

**Recreation/Open Space Land Use Policy B-1:** The City of Marina shall link open space areas to each other.



**Program B-1.2:** The City of Marina shall create an open space plan for the former Fort Ord showing the linkage of all open space areas within the City of Marina and linking to open space and habitat areas outside Marina.

**Recreation/Open Space Land Use Policy B-2:** The City of Marina shall use open space as a buffer between various types of land use.

**Program B-2.1:** The City of Marina shall review each development project at the former Fort Ord with regard to the need for open space and buffers between land uses.

**Program B-2.2:** The City of Marina shall encourage clustering of all types of land uses, where appropriate, to allow for a portion of each project site to be dedicated as permanent open space.

**Program B-2.3:** The City of Marina shall designate open space areas, wherever possible, on the perimeter of all development undertaken at the former Fort Ord.

**Program B-2.4:** In the Planned Development/Mixed Use District in the Existing City Marina Neighborhoods Planning Area, intended for public facilities such as the future Marina Civic Center and related facilities, the City shall install an open space barrier along the border of adjacent Polygon 5b to prevent potential degradation of this undeveloped habitat. Both polygons provide corridor linkage from the maritime chaparral around the airfield to the habitats in the interior.

*Objective C: Reserve sufficient lands for community and neighborhood parks and recreation facilities in the Fort Ord area and adjacent communities.*

**Recreation/Open Space Land Use Policy C-1:** The City of Marina shall designate sufficient area for projected park and recreation facilities at the former Fort Ord.

**Program C-1.1:** The City of Marina shall amend its General Plan and zoning ordinance to designate appropriate park and recreation facilities at the former Fort Ord to serve the needs of their community area, appropriate and consistent with the recreation standards established for the Fort Ord Reuse Plan.

**Program C-1.2:** The City of Marina shall use the following Recreation Standards established for Fort Ord reuse and based on existing Marina Community Standards:

- Provide and equip five park acres per one thousand residents.
- 2015 demand for park area: 42 acres.
- Full build-out for park area: 64 acres.

**Program C-1.3:** The City of Marina shall designate land uses for the following park locations and acreages:

- Neighborhood Park in housing area (Polygon 4): 27 acres.
- Neighborhood Park with community recreation center (Polygon 2B): 10 acres.
- Community Park at existing equestrian center (Polygon 2G): 39.5 acres.
- Community Park with equestrian trailhead (Polygon 17A): 46 acres.

**Recreation/Open Space Land Use Policy C-2:** The City of Marina shall provide sufficient resources to operate and maintain the park facilities at the former Fort Ord.

**Program C-2.1:** The City of Marina shall provide in the annual budget for a minimal recreation program at the time that each park is developed. The city should also provide a budget for a complete recreation and park maintenance program when the population to be served by the park reaches one thousand residents.

**Program C-2.2:** Each park in Marina should be developed and recreation equipment should be in place when approximately 50% of the residential dwelling units that will be served by the park have been constructed and occupied.

*Objective D: Retain open space to enhance the appearance of special areas that serve as primary gateways to the Fort Ord area.*

**Recreation/Open Space Land Use Policy D-1:** The City of Marina shall protect the visual corridor along State Highway 1 to reinforce the character of the regional landscape at this primary gateway to the former Fort Ord and the Monterey Peninsula.

**Program D-1.1:** The City of Marina shall designate the State Highway 1 corridor along the former Fort Ord as a special design district in its zoning code.

**Program D-1.2:** The City of Marina shall develop special design standards for the State Highway 1 Special Design District textual (and not graphic) and establish a hierarchy of gateways as a part of these standards to help define the Fort Ord community and signify a sense of entry and threshold into the community.

**Program D-1.3:** The City of Marina shall designate the retail and open space areas along the State Highway 1 area and the Mixed Use Corporate Center area (Polygons 2a and 2b) as a Special Design District to convey the commitment to high-quality development to residents and visitors.

**Program D-1.4:** For this Special Design District, the City of Marina shall provide for such features as setbacks and buffers, height limits, architectural quality, landscaping and pedestrian access, as well compatibility with surrounding areas as a part of the design standards.



**Program D-1.5:** The City of Marina shall consider supporting the State Department of Parks and Recreation to develop a State Park entry and information center at the 8th Street Bridge.

**City of Seaside**

*Objective A: Encourage land uses that respect, preserve and enhance natural resources and open space at the former Fort Ord.*

**Recreation/Open Space Land Use Policy A-1:** The City of Seaside shall protect irreplaceable natural resources and open space at former Fort Ord.

**Program A-1.1:** The City of Seaside shall identify natural resources and open space, and incorporate it into its General Plan and zoning designations.

**Recreation/Open Space Land Use Policy A-2:** The City of Seaside shall encourage the provision of public open space lands as part of all types of development including residential, commercial and institutional.

**Program A-2.1:** As part of review of development projects, the City of Seaside shall evaluate and provide for the need for public open space.

*Objective B: Use open space as a land use link and buffer.*

**Recreation/Open Space Land Use Policy B-1:** The City of Seaside shall link open space areas to each other.

**Program B-1.2:** The City of Seaside shall create an open space plan for the former Fort Ord showing the linkage of all open space areas within the City of Seaside as well as linking to open space and habitat areas outside Seaside.

**Recreation/Open Space Land Use Policy B-2:** The City of Seaside shall use open space as a buffer between various types of land use.

**Program B-2.1:** The City of Seaside shall review each development project at the former Fort Ord with regard to the need for open space buffers between land uses.

**Program B-2.2:** The City of Seaside shall encourage clustering of all types of land uses, where appropriate, to allow for a portion of each project site to be dedicated as permanent open space.

**Program B-2.3:** The City of Seaside shall designate open space areas, wherever possible, on the perimeter of all development undertaken at the former Fort Ord.

**Program B-2.4:** The City of Seaside shall designate a fire-resistant buffer between BLM lands and residential land use.

*Objective C: Reserve sufficient lands for community and neighborhood parks and recreation facilities in the Fort Ord area and adjacent communities.*



**Recreation/Open Space Land Use Policy C-1:** The City of Seaside shall designate sufficient area for projected park and recreation facilities at the former Fort Ord.

**Program C-1.1:** The City of Seaside shall amend its General Plan and zoning ordinance to designate appropriate park and recreation facilities at the former Fort Ord to serve the needs of their community area, appropriate and consistent with the recreation standards established for the Fort Ord Reuse Plan.

**Program C-1.2:** The City of Seaside shall use the following recreation standards established for Fort Ord reuse and based on existing Seaside Community Standards:

- Provide and equip neighborhood parks at the rate of two park acres per 1,000 people and community parks at the rate of one acre per 1,000 people.
- 2015 demand for park area: 24 acres of neighborhood parks, 12 acres of community parks.
- Full build-out demand for park area: 31 acres of neighborhood parks, 16 acres of community parks.

**Program C-1.3:** The City of Seaside shall designate land uses for the following park locations and acreages:

- Community Park in housing area (Polygon 18): 50 acres.
- Neighborhood Park near new golf course community (Polygon 15): 10 acres.
- Neighborhood Park serving University Village Area (Polygon 20e): 5 acres.
- Neighborhood Park with Recreation Center (Polygon 20h): 10 acres.
- Community Park with equestrian/trailhead access to BLM: (Polygon 24): 25 acres.

**Recreation/Open Space Land Use Policy C-2:** The City of Seaside shall provide sufficient resources to operate and maintain the park facilities at the former Fort Ord.

**Program C-2.1:** The City of Seaside shall provide in the annual budget for a minimal recreation program at the time that each park is developed. The city should also provide a budget for a complete recreation and park maintenance program when the population to be served by the park reaches one thousand residents.

**Program C-2.2:** Each park in Seaside should be developed and recreation equipment should be in place when approximately 50% of the residential dwelling units that will be served by the park have been constructed and occupied.



**Recreation/Open Space Land Use Policy C-3:** The City of Seaside shall coordinate land use designations for parks and recreation with adjacent uses and jurisdictions.

**Program C-3.1:** The City of Seaside shall include protection criteria in its plan for the community park in the Seaside Residential Planning Area (Polygon 24) for the neighboring habitat protection area in Polygon 25. Creation of this park will also require consideration of existing high-power electric lines and alignment of the proposed Highway 68 connector to General Jim Moore Boulevard.

**Program C-3.2:** The 50-acre community park in the University Planning Area (Polygon 18) should be sited, planned and managed in coordination with neighboring jurisdictions (CSUMB and County of Monterey).

**Program C-3.3:** The City of Seaside shall attempt to work out a cooperative park and recreation facilities agreement with MPUSD and CSUMB.

*Objective D: Retain open space to enhance the appearance of special areas that serve as primary gateways to the Fort Ord area.*

**Recreation/Open Space Land Use Policy D-1:** The City of Seaside shall protect the visual corridor along State Highway 1 to reinforce the character of the regional landscape at this primary gateway to the former Fort Ord and the Monterey Peninsula.

**Program D-1.1:** The City of Seaside shall designate the State Highway 1 corridor along the former Fort Ord as a special scenic corridor overlay design district in its zoning code.

**Program D-1.2:** The City of Seaside shall develop special design standards for the State Highway 1 Special Design District textual (and not graphic) and establish a hierarchy of gateways as a part of those standards to help define the Fort Ord community and signify a sense of entry and threshold into the community.

**Program D-1.3:** The City of Seaside shall designate the retail and open space areas along the Main Gate area (Polygon 15), the South Village mixed-use area (Polygon 20e), and a strip 500 feet wide (from the Caltrans Row) along State Highway 1 (Polygons 20a and 20h) as Special Design Districts to convey the commitment to high-quality development to residents and visitors.

**Program D-1.4:** For this Special Design District, the City of Seaside shall provide for such features as setbacks, architectural quality, landscaping and pedestrian access, buffers and height limits, as well compatibility with surrounding areas as a part of the design standards.

**Program D-1.5:** The City of Seaside shall develop a coordinated building and landscape design plan in conjunction with FORA and CSUMB representatives to create a “grand entry” at the main gate entrance area and shall work with the State Department of Parks and Recreation to create a secondary entry. The landscape plan shall enhance and reinforce the regional character of the main entrance area.

**County of Monterey**

*Objective A: Encourage land uses that respect, preserve and enhance natural resources and open space at the former Fort Ord.*

**Recreation/Open Space Land Use Policy A-1:** The County of Monterey shall protect irreplaceable natural resources and open space at former Fort Ord.

**Program A-1.1:** The County of Monterey shall identify natural resources and open space, and incorporate them into its Greater Monterey Peninsula Area Plan and zoning designations.

**Program A-1.2:** The County of Monterey shall cause to be recorded a Natural Ecosystem Easement deed restriction that will run with the land in perpetuity for all identified open space lands.

**Recreation/Open Space Land Use Policy A-2:** The County of Monterey shall encourage the provision of public open space lands as part of all types of development including residential, commercial and institutional.

**Program A-2.1:** As part of review of development projects, the County of Monterey shall evaluate and provide for the need for public open space.

*Objective B: Use open space as a land use link and buffer.*

**Recreation/Open Space Land Use Policy B-1:** The County of Monterey shall link open space areas to each other.

**Program B-1.2:** The County of Monterey shall create an open space plan for former Fort Ord showing the linkage of all open space areas with the County of Monterey as well as linking to open space and habitat areas outside the County.

**Recreation/Open Space Land Use Policy B-2:** The County of Monterey shall use open space as a buffer between various types of land use.

**Program B-2.1:** The County of Monterey shall review each future development projects for compatibility with adjacent open space land uses and require that suitable open space buffers are incorporated into development plans of incompatible land uses as a condition of project approval. When buffers are required as a condition of approval adjacent to habitat management areas, the buffer shall be at least 150 feet. Roads shall not be allowed within the buffer area except for restricted access maintenance or emergency access roads.

**Program B-2.2:** The County of Monterey shall encourage clustering of all types of land uses, where appropriate, to allow for a portion of each project site to be dedicated as permanent open space.

**Program B-2.3:** The County of Monterey shall designate open space areas, wherever possible, on the perimeter of all development undertaken at the former Fort Ord.



**Program B-2.4:** The County of Monterey shall designate a fire-resistant buffer between BLM lands and residential land use.

*Objective C: Reserve sufficient lands for community and neighborhood parks and recreation facilities in the Fort Ord area and adjacent communities.*

**Recreation/Open Space Land Use Policy C-1:** The County of Monterey shall designate sufficient area for projected park and recreation facilities at the former Fort Ord.

**Program C-1.1:** The County of Monterey shall amend its Greater Monterey Peninsula Area Plan and zoning ordinance to designate appropriate park and recreation facilities at the former Fort Ord to serve the needs of their community area, appropriate and consistent with the recreation standards established for the Fort Ord Reuse Plan and the County Subdivision Ordinance which identifies a standard of 3 acres per 1,000 people.

**Program C-1.2:** The County of Monterey shall designate land uses for the following park locations and acreages:

- Neighborhood Park in Eucalyptus Road Residential Planning Area (Polygon 19a): 10 acres.
- A minimum of 200 acres in permanent open space within the Eucalyptus Road residential planning area.

**Program C-1.3:** This parkland shall be created in such a way as to maximize protection of existing oak woodland in support of the Habitat Management Plan.

**Program C-1.4:** The County of Monterey shall amend its Greater Monterey Peninsula Area Plan map to include this land as Park and Open Space.

**Recreation/Open Space Land Use Policy C-2:** The County of Monterey shall provide sufficient resources to operate and maintain the park facilities at the former Fort Ord.

**Program C-2.1:** The County of Monterey shall provide in the annual budget for a minimal recreation program at the time that each park is developed. The county should also provide a budget for a complete recreation and park maintenance program when the population to be served by the park reaches one thousand residents.

**Program C-2.2:** Each park in the County of Monterey should be developed and recreation equipment should be in place when approximately 50% of the residential dwelling units that will be served by the park have been constructed and occupied.

(There is no Objective D discussion for Monterey County.)

*Objective E: Coordinate open space and recreation land use with other affected agencies at the former Fort Ord, such as the California Department of State Parks and Recreation and the Bureau of Land Management.*

**Recreation/Open Space Land Use Policy E-1:** The County of Monterey shall limit recreation in environmentally sensitive areas, such as dunes and areas with rare, endangered, or threatened plant or animal communities to passive, low-intensity recreation dependent on the resource and compatible with its long term protection.

**Program E-1.1:** The County of Monterey shall assist the CDPR to develop and implement a Master Plan for ensuring the management of the Fort Ord coastal dunes and beaches for the benefit of the public by restoring habitat, recreating the natural landscape, providing public access, and developing appropriate day use and overnight lodging facilities (limited to a capacity of 40 rooms).

**Program E-1.2:** The County of Monterey shall coordinate with the State Department of Parks and Recreation to resolve the issue of a frontage roadway to connect the cities of Marina and Sand City.

**Program E-1.3:** The County of Monterey shall work with and support the Army to investigate clean-up of the Recreation/HMP District in the CSUMB/Recreation Planning Area (Polygon 8a). This area is proposed to be used for remediation and reuse research, habitat management, open space/recreation (including an equestrian center, a golf course opportunity site, and an amphitheater), and a convenience center. This proposed use is subject to capping of the landfill and remediation of groundwater beneath it. A minimum of 120 acres will require mitigation by the Army. The polygon is considered for an annexation request by the City of Marina. Drainage, slumping, toxic fumes or gases associated with old landfill need to be considered.

**Program E-1.4:** The proposed community park facility in the Recreation/HMP District in the CSUMB/Recreation Planning Area (Polygon 17a) will use about 30 acres of land currently dominated by oak woodland for an equestrian center and other recreational facilities. The park will serve as a gateway to trails in the Bureau of Land Management (BLM) area. The County of Monterey shall coordinate polygon and property boundary adjustments as needed to meet jurisdictional requirements of the County, the City of Marina and CSUMB.

**Program E-1.5:** The Youth Camp District in the Reservation Road Planning Area (Polygon 17b) is intended for rehabilitation of the existing travel camp. The County of Monterey shall assure that this planned use is compatible with adjacent land uses which may include a public safety agency training facility with shooting ranges in the East Garrison.

**4.1.5 Institutional Land Use**

**4.1.5.1 Summary of Existing Conditions**

***Fort Ord***

This land use category includes military support/industrial areas such as motor pools, machine shops, the former Fritzsche Airfield, and a vehicle parts yard;



three elementary and one middle school; and the former Hayes Army Hospital, medical and dental facilities, and a helipad.

**City of Marina**

Institutional land uses within the Marina city limits include the former Fritzsche Airfield (now Marina Municipal Airport), Patton Elementary School, and troop support, administrative, storage, service and maintenance facilities.

**City of Seaside**

The Seaside city limits encompass three elementary and one middle school, the former Hayes Army Hospital, and troop support, administrative, and storage facilities.

**County of Monterey**

Monterey County designates all land within Fort Ord boundaries public/quasi-public. The East Garrison area in the unincorporated area of Monterey County was largely designated as a military support/industrial land use.

**4.1.5.2 Institutional Land Use Objectives**

*Objective A: Encourage proper planning of public lands so that uses on these lands are compatible with existing and planned uses on adjacent privately-owned lands.*

The land use design concept for the former Fort Ord stresses cohesiveness of institutional lands with adjacent uses. Incompatible uses can disrupt the development process of public facilities and cause the creation of barriers, while coordination with planning of neighboring areas will enhance the quality of life and encourage interaction among all planning areas.

*Objective B: Consider special needs of schools in developing land and infrastructure.*

The broad range of educational activities that already exist at or are planned for the former Fort Ord provide the nucleus for redevelopment of the former base. In addition to the universities which represent two major activity nodes at the former Fort Ord, the area will be home to a number of other educational uses, including five existing elementary and middle schools and several planned locations for community college extension programs and private higher education institutions. Consideration of the special school-related planning and safety needs will contribute toward the goal of educational excellence at the former Fort Ord.

*Objective C: Encourage highest and best use of institutional lands associated with military enclave redevelopment at the former Fort Ord.*

Achieving maximum market value for development of the former Fort Ord lands is a key goal of reuse planning efforts. Enhancing the existing use of POM Annex lands in the Seaside area of the former Fort Ord will contribute to this goal.

*Objective D: Provide for Community Design principles and guidelines for institutional development at the former Fort Ord.*

Establishing high-quality design standards when developing the public lands at the former Fort Ord will contribute to their integration into the communities which surround them. It will also ensure that the specific features associated with institutions, such as gateways and transition areas, will enhance community identity and support the unified vision for the former Fort Ord shared by public institutions and Monterey Bay jurisdictions.

**4.1.5.3 Institutional Land Use Policies and Programs**

**City of Marina**

*Objective A: Encourage proper planning on and adjacent to public lands so that uses on these lands are compatible.*

**Institutional Land Use Policy A-1:** The City of Marina shall review and coordinate with the universities, colleges and other school districts or entities, the planning of both public lands designated for university-related uses and adjacent lands.

**Program A-1.1:** The City of Marina shall be included in the master planning efforts undertaken by the University of California and California State University, and jointly with those agencies ensure compatible land uses between university lands and non-university lands.

**Program A-1.2:** The City of Marina shall designate the land surrounding the UC MBEST Center Cooperative Planning District and CSUMB planning areas for compatible use, such as Planned Development Mixed Use Districts, to encourage use of this land for a university and research oriented environment and to prevent the creation of pronounced boundaries between the campus and surrounding communities.

**Program A-1.3:** The City of Marina shall review and, if necessary, revise its zoning ordinance regulations on the types of uses allowed in areas adjacent to the UC MBEST Center Cooperative Planning District and the CSUMB Planning Area District, so as to ensure compatibility of uses; the City will adopt zoning standards to ensure a suitable transition of land use types, density, design, circulation and roadways to the areas designated for university-related uses.

**Program A-1.4:** The City of Marina shall minimize the impacts of or eliminate land uses which may be incompatible with public lands, such as a public maintenance yard and a transfer station, and an existing equestrian center located in the Marina Village District north of the CSUMB campus.

**Institutional Land Use Policy A-2:** The City of Marina shall encourage CSUMB to pursue the early redevelopment of the boundary lands, to the degree possible, to support the revitalization of the Marina Village District.



**Institutional Land Use Policy A-3:** The City of Marina shall carefully review and coordinate with UC the planning of the lands designated for airport-related uses surrounding the Marina Municipal Airport.

**Program A-3.1:** The City of Marina shall designate the land surrounding the Marina Municipal Airport for compatible uses, such as Business Park/Light Industrial/Office/R&D, Visitor Serving, or Habitat Management, and coordinate land use designations and decisions with UC.

**Program A-3.2:** The City of Marina shall review and modify, as necessary, its zoning ordinance regulations on the types of uses allowed in areas adjacent to the Marina Municipal Airport District and adopt zoning standards to provide a suitable transition of land use types, density, design, circulation and roadways.

*Objective B: Consider special needs of schools in developing land and infrastructure.*

**Institutional Land Use Policy B-1:** The City of Marina shall provide a compatible and safe environment for schools serving former Fort Ord areas when planning land use and infrastructure improvements.

**Program B-1.1:** The City of Marina shall review all planning and design for land use and infrastructure improvements in the vicinity of public schools or college facilities, especially with respect to land use compatibility (expected impacts of residential and other development), school safety and ensure appropriate compatibility, including all applicable safety standards for development near schools as a condition of project approval.

**Program B-1.2:** The City of Marina shall inform the Monterey Peninsula Unified School District and Monterey Peninsula College of all proposed land use and infrastructure improvements which may impact school and college sites.

**Program B-1.3:** The City of Marina shall designate the location of a new high school in accordance with state and local safety and siting standards.

(There is no Objective C discussion for the City of Marina.)

*Objective D: Provide for Community Design principles and guidelines for institutional development at the former Fort Ord.*

**Institutional Land Use Policy D-1:** The City of Marina shall support FORA in the preparation of regional urban design guidelines, including a scenic corridor design overlay area, to govern the visual quality of areas of regional importance.

**Institutional Land Use Policy D-2:** The City of Marina shall adhere to the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework for institutional development at the former Fort Ord.

**Program D-2.1:** The City of Marina shall prepare design guidelines for implementing institutional development on former Fort Ord lands consistent with the regional urban design guidelines (to be prepared by FORA) and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.



**Program D-2.2:** The City of Marina shall review each institutional development proposal for consistency with the regional urban design guidelines and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**City of Seaside**

*Objective A: Encourage proper planning on and adjacent to public lands so that uses on these lands are compatible.*

**Institutional Land Use Policy A-1:** The City of Seaside shall review and coordinate with the universities, colleges and other school districts or entities the planning of both public lands designated for university-related uses and adjacent lands.

**Program A-1.1:** The City of Seaside shall request to be included in the master planning efforts undertaken by the California State University and shall take an active role to ensure compatible land uses into transition between university lands and non-university lands.

**Program A-1.2:** The City of Seaside shall designate the land surrounding the CSUMB Planning Area for compatible use, such as Planned Development Mixed Use Districts, to encourage use of this land for a university and research oriented environment and to prevent the creation of pronounced boundaries between the campus and surrounding communities.

**Program A-1.3:** The City of Seaside shall review its zoning ordinance regulations on the types of uses allowed in areas adjacent to the CSUMB Planning Area District to promote compatibility of uses and adopt zoning standards to provide a suitable transition of land use types, density, design, circulation and roadways to the areas designated for university-related uses.

**Program A-1.4:** The City of Seaside shall minimize the impacts of land uses which may be incompatible with public lands, such as a regional retail and entertainment use in the Gateway Regional Entertainment District located at the western entrance of the CSUMB campus. The City shall coordinate the planning of this site with CSUMB and the City of Marina.

*Objective B: Consider special needs of schools in developing land and infrastructure.*

**Institutional Land Use Policy B-1:** The City of Seaside shall provide a compatible and safe environment for schools serving Fort Ord areas when planning land use and infrastructure improvements.

**Program B-1.1:** The City of Seaside shall review all planning and design for Fort Ord land use and infrastructure improvements in the vicinity of schools ensure appropriate compatibility including all safety standards for development near schools, as a condition of project approval.

**Program B-1.2:** The City of Seaside shall inform the Monterey Peninsula Unified School District of all proposed land use and infrastructure improvements which may impact school and college sites.



*Objective C: Encourage highest and best use of institutional lands associated with military enclave redevelopment at the former Fort Ord.*

**Institutional Land Use Policy C-1:** The City of Seaside shall encourage opportunities for developing market-responsive housing in the POM Annex Military Enclave District at the former Fort Ord.

**Program C-1.1:** The City of Seaside shall develop an agreement with the U.S. Army to implement the reconfiguration of institutional land use related to the POM Annex community.

*Objective D: Provide for Community Design principles and guidelines for institutional development at the former Fort Ord.*

**Institutional Land Use Policy D-1:** The City of Seaside shall support FORA in the preparation of regional urban design guidelines, including a scenic corridor design overlay area, to govern the visual quality of areas of regional importance.

**Institutional Land Use Policy D-2:** The City of Seaside shall adhere to the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework for institutional development at the former Fort Ord.

**Program D-2.1:** The City of Seaside shall prepare design guidelines for implementing institutional development on former Fort Ord lands consistent with the regional urban design guidelines (to be prepared by FORA) and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Program D-2.2:** The City of Seaside shall review each institutional development proposal for consistency with the regional urban design guidelines and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**County of Monterey**

*Objective A: Encourage proper planning on and adjacent to public lands so that uses on these lands are compatible.*

**Institutional Land Use Policy A-1:** The County of Monterey shall review and coordinate with the universities, colleges and other school districts or entities in the planning of both public lands designated for university-related uses and adjacent lands.

**Program A-1.1:** The County of Monterey shall be included in the master planning efforts undertaken by the University of California and California State University and jointly with those agencies ensure compatible land uses in the transition between university and non-university lands.



**Program A-1.2:** The County of Monterey shall review, and if necessary, revise its zoning ordinance regulations on the types of uses allowed in areas adjacent to the UC MBEST Center Cooperative Planning District and the CSUMB Planning Area District, so as to ensure compatibility of uses; the County will adopt zoning standards to ensure a suitable transition of land use types, density, design, circulation and roadways to the areas designated for university-related uses.

**Program A-1.3:** The County of Monterey shall designate the land surrounding the UC MBEST Center Cooperative Planning District and CSUMB planning areas for compatible use, such as Business Park/Light Industrial/Office/R&D and Planned Development Mixed Use, to encourage use of this land for a university and research oriented environment and to prevent the creation of pronounced boundaries between the campus and surrounding communities.

**Program A-1.4:** The County of Monterey shall minimize the impacts of proposed land uses which may be incompatible with public lands, such as major roadways near residential or university areas, location of the York School expansion area adjacent to the habitat management area, and siting of the Monterey Peninsula College’s Military Operations Urban Terrain (MOUT) law enforcement training program in the BLM Management/Recreation Planning Area.

*Objective B: Consider special needs of schools in developing land and infrastructure.*

**Institutional Land Use Policy B-1:** The County of Monterey shall provide a safe environment for schools serving Fort Ord areas when planning land use and infrastructure improvements.

**Program B-1.1:** The County of Monterey shall review all planning and design for Fort Ord land use and infrastructure improvements in the vicinity of schools and ensure appropriate compatibility, including all applicable safety standards for development near schools, as a condition of project approval.

(There is no Objective C discussion for the County of Monterey)

*Objective D: Provide for Community Design principles and guidelines for institutional development at the former Fort Ord.*

**Institutional Land Use Policy D-1:** The County of Monterey shall support FORA in the preparation of regional urban design guidelines, including a scenic corridor design overlay area, to govern the visual quality of areas of regional importance.

**Institutional Land Use Policy D-2:** The County of Monterey shall adhere to the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework for institutional development at the former Fort Ord.



## Fort Ord Reuse Plan

**Program D-2.1:** The County of Monterey shall prepare design guidelines for implementing institutional development on former Fort Ord lands consistent with the regional urban design guidelines (to be prepared by FORA) and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

**Program D-2.2:** The County of Monterey shall review each institutional development proposal for consistency with the regional urban design guidelines and the General Development Character and Design Objectives of the Fort Ord Reuse Plan Framework.

Reuse Plan Elements  
4

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## 4.2 Circulation Element

### 4.2.1 Introduction

The Circulation Element of the General Plan defines the long-term vision for a comprehensive circulation network for the movement of people, goods, and vehicles within and through the former Fort Ord. It focuses on the system of freeways, arterials, bus and rail transit, and bicycle and pedestrian routes to determine the most effective design possible while enhancing the community and protecting the environment. The Circulation Element also recognizes the close relationship between the transportation system and land use plan.

In the regional context, State Highway 1 connects the Monterey Peninsula and coastal portions of the county to the south with Santa Cruz County and, indirectly, Santa Clara County to the north. State Highway 1 extends across the base in a north-south alignment approximately one-quarter mile inland from the ocean. Locally, State Highway 1 provides connections between Marina on the north and Seaside/Sand City to the south. The primary entrances to the former Fort Ord are accessed from State Highway 1 at the Main Gate and the 12th Street Gate. The Southern Pacific Del Monte Branch line parallels the highway.

There are two east-west corridors that proximate the former Fort Ord. State Highway 68 runs along the south and east sides of the base connecting Salinas with the Monterey Peninsula. Reservation Road extends through the base on the north between Marina and East Garrison. Blanco and Davis Roads intersect Reservation Road, providing connections to Salinas. Entrances to the former Fort Ord are provided off of Reservation Road, as well as Fremont, Broadway, and State Highway 218.

At its peak, Fort Ord was home to 17,700 military personnel and employed 2,700 civilians from the neighboring communities. Access to the base was provided through gates at 12th, Lightfighter, Fremont/Coe, Broadway, Reservation/Imjin, and Reservation/Inter-garrison. Internally, the existing road system was developed by the Army as the base expanded over the past fifty years. The layout is a collage of roadways and parking facilities scattered about to serve the Army's unique needs. The Army, unlike the civilian sector, was not constricted by property lines, easements, or aesthetic standards. In addition, land use patterns by the Army did not produce the same types of traffic patterns as those that might be found in a civilian urban population. This has resulted in a roadway system that is, in many instances, not compatible with the proposed civilian land uses.

The proposed land use plan includes approximately 45,000 jobs and over 22,000 housing units at buildout. In addition, the California State University Monterey Bay (CSUMB) campus is to be located on the former Fort Ord. CSUMB is expected to have 25,000 full-time equivalent students, with on-campus housing for 80% of these students. The redevelopment of the former Fort Ord will increase the demand for transportation infrastructure and services both within

*Goal: Create and maintain a balanced transportation system, including pedestrian ways, bikeways, transit, and streets, to provide for the safe and efficient movement of people and goods to and throughout the former Fort Ord.*



the base area and the region. The transportation plan for Fort Ord reuse includes strategies and improvements for the system within the base, as well as for those regionally significant facilities that provide access to the former Fort Ord.

The transportation system described in this Circulation Element consists of several elements: linkages to land use plans, streets, and roads, public transit, pedestrian, bicycle, and demand management. This system is intended to serve the long-range, buildout needs of the former Fort Ord. Policies and programs related to these elements apply to all of the former Fort Ord consistently; therefore, separate discussions are not provided for Marina, Seaside, and Monterey County.

## 4.2.2 Streets and Roads

Streets and roads form the basic element of the transportation system. This element consists not only of streets within the former Fort Ord, but also key regional roads that provide access to and from the former Fort Ord. This regional network includes state highways and major arterial roads that serve intra- and inter-regional travel needs of the former Fort Ord and Monterey County. This network includes State Highway 1 which extends across the base in a north-south alignment approximately one-quarter mile inland from the ocean. The primary entrances to the former Fort Ord are accessed from State Highway 1. Key east-west facilities include State Highway 68 and Reservation Road. State Highway 68 runs along the south and east sides of the base connecting Salinas with the Monterey Peninsula. Reservation Road extends through the base on the north between Marina and East Garrison. Blanco and Davis Roads intersect Reservation Road, providing connections to Salinas. Entrances to the former Fort Ord are provided off of Reservation Road, as well as Fremont, Broadway, and State Highway 218.

In developing a roadway element for the revised reuse plan, the key goals were to reduce the infrastructure needs, both internally to the former Fort Ord and regionally, and to reduce traffic volumes on key roadways as an effort to eliminate or reduce deficient service levels and other traffic-related impacts. A particular area of concern that was addressed was that of traffic volumes along the 12th/Imjin and Blanco corridor. The principal method used to achieve these goals was to enhance the distribution of trips among the travel routes available. The key elements of this method included: enhancing regional access alternatives, providing additional local access routes, and enhancing the internal circulation system to reduce through trips on facilities in the higher density or otherwise sensitive areas.

### 4.2.2.1 Operating Conditions

In developing the streets and roads element of the transportation system it is important to understand the conditions under which this network operates both currently and in the future. In doing so, it is necessary to be familiar with the concepts of Level-of-Service (LOS) and Street Functional Classification. Unless otherwise stated, the number of lanes referenced for a roadway represents



the number of lanes in both directions. Therefore, a road with two lanes in each direction is referred to as a four-lane road.

### ***LOS Methodology***

For this study, the performance of the roadway network is described using a LOS methodology. LOS refers to a hierarchy of performance measures describing different levels of operational conditions within a traffic stream and the perception of these conditions by motorists and/or passengers. LOS is represented by a continuum of six grades of progressively more congested traffic flow, LOS A through LOS F, where LOS A represents free and unobstructed traffic flow, and LOS F represents “stop and go” traffic.

A number of methodologies exist for determining roadway LOS. Since the methodology used in this study must be applied to both existing and forecasted future year conditions, a key determinant in selecting the appropriate methodology was the nature of forecast outputs available from the regional travel demand forecasting model. Also, the model used in this study produces only daily forecasts of traffic volumes, so a methodology based on daily volumes was required. The Congestion Management Program (CMP) uses the intersection level of service methodology from the Highway Capacity Manual (HCM) to determine which signalized roadway section requires deficiency plans. The FDOT arterial LOS methodology is used by the CMP to forecast future LOS using MCTAM model outputs and assess the cumulative impacts of forecasted development on the regional transportation system.

The FDOT manual includes three sets of LOS tables representing different area types: urbanized, transitioning, and rural. These tables reflect differences in the assumed capacities and free flow speeds that are primarily a function of differences in driver behavior between these area types. The “transitioning” area type tables were selected for this analysis because the Fort Ord region is a mix of low density urban and rural areas. The “urbanized” tables were also considered, but were not selected because they are intended to be used for major metropolitan areas.

The ranges of daily volumes corresponding to each LOS grade for the facility types examined in this study are identified in Table 4.2-1. As indicated in the table, the range of daily volumes corresponding to a particular LOS grade varies depending on the type of the facility. Facility type refers to a categorical classification of roadways based on speed, capacity, and signal spacing (e.g. freeways, arterials, and local roads). The roadway categories used in this study are listed below.

- **Freeways:** These are high-speed facilities designed to carry large volumes of traffic. Freeways are limited-access roadways, so traffic can only enter and exit at specific locations.
- **Arterials:** This classification refers to a range of roadways that include urban streets and rural highways. Arterials have signalized intersections and are generally designed to serve





through traffic. They are categorized in four groups according to the number of signalized intersections per mile. Group A arterials are generally rural roads, while Group D arterials are found in densely-developed urbanized areas.

- **Local Roads:** These facilities are designed for lower volumes of traffic. Intersections are controlled by stop signs or signals.

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Facility Type	Design Attributes*	Traffic Volume Threshold by LOS**				
		A	B	C	D	E
Freeway	4 - Divided	20,100	32,500	47,900	60,400	68,100
	6 - Divided	30,400	48,500	72,200	91,100	107,300
Uninterrupted Highway/Arterial	2 - Undivided	8,400	13,000	17,000	23,300	31,000
	4 - Divided	20,600	34,500	47,800	57,000	66,300
Arterial - Class Ia (less than 2.5 signalized intersections per mile)	2 - Undivided	***	11,500	14,000	15,300	15,900
	4 - Divided	***	25,500	30,600	32,800	33,500
	6 - Divided	***	39,600	46,400	49,700	50,300
Arterial - Class Ib (2.50 to 4.50 signalized intersections per mile)	2 - Undivided	***	***	8,000	13,200	14,600
	4 - Divided	***	***	17,600	28,600	31,300
	6 - Divided	***	***	26,900	43,600	47,300
Arterial - Class II (more than 4.50 signalized intersections per mile)	4 - Divided	***	***	***	24,600	30,900
	6 - Divided	***	***	***	37,800	47,000
Other Local Road	2 - Undivided	***	***	4,700	9,200	10,600
	4 - Divided	***	***	10,300	20,500	22,800

<b>ADJUSTMENTS</b>			
(alter corresponding two-way volume by indicated percent)			
DIVIDED/UNDIVIDED			
Lanes	Median	Left Turn Bays	Adjustment Factors
2	Divided	Yes	+ 5%
2	Undivided	No	- 20%
4+	Undivided	Yes	- 5%
4+	Undivided	No	- 25%

\* Assume Left Turn Bays in all cases (except for freeways where not applicable)

\*\* volume cannot exceed threshold to classify roadway at the LOS grade

\*\*\* cannot be achieved

Source: Florida Department of Transportation, 1995



It should be noted that volume ranges for LOS A or B are not defined for some facility types. Another important consideration is that LOS F does not necessarily indicate that congested traffic conditions exist throughout the day. When using LOS grades based on daily volumes (as in Table 4.2-1), an LOS grade of F indicates that traffic volumes during certain periods are greater than the roadway was designed to handle, and that there may be congestion during these periods.

One common way to establish where roadway system deficiencies exist is to observe where the calculated LOS falls below the acceptable level of performance. The Transportation Agency of Monterey County (TAMC) has established acceptable service levels as LOS D or better.

It must be recognized that traffic volumes will vary within a given roadway segment due to vehicles entering or exiting at minor intersections or driveways. Thus, for this analysis, the median traffic volume within a given segment was used to determine LOS. This approach is consistent with that used by the Monterey County CMA.

### **Street Functional Classification**

As part of a previous study, the Fort Ord Reuse Infrastructure Study (FORIS), a street functional classification system for the former Fort Ord was developed, which further differentiates the roadway categories by function and area type. The proposed roadway system for the Fort Ord Reuse Area can be broken into five classifications: Urban Arterial, Urban Collector, Urban Local, Rural Arterial, and Rural Local. These classifications have been adopted from the AASHTO (American Association of State Highway Transportation Officials) Functional Classification System.

**Urban Arterial Street System:** The urban arterial system serves the major centers of activity in urbanized areas, the highest traffic volume corridors, and the longest trips, and carries a high proportion of the total urban area travel. The arterial system carries most intra-urban and inter-city bus routes. Arterial service to abutting land is subordinate to travel service for major traffic movements. Arterials are also a key part of the bikeway system and, as such, Class I bikeways (as defined in the Caltrans Highway Design Manual), which are facilities separated from the roadway, are generally provided in the former Fort Ord to encourage and allow safe bicycle travel along these streets.

**Urban Collector Streets:** The collector street system provides both land access service and traffic circulation within residential neighborhoods and commercial industrial areas. It differs from the arterial system in that facilities on the collector system may penetrate residential neighborhoods, distributing trips from the arterials through the area to their ultimate designations. Conversely, the collector street also collects traffic from local streets in residential neighborhoods and channels it into the arterial system.

**Urban Local Streets:** The local street system primarily permits direct access to abutting lands and connections to the higher order systems. It offers the lowest level of mobility and usually contains no bus routes. Service to through-traffic movement usually is deliberately discouraged.

**Rural Arterials:** Rural arterial roads form a network that provides linkage of cities, larger towns, and other traffic generators (such as major resort, commercial, or industrial areas) that are capable of attracting travel over similarly long distances.

**Rural Local Roads:** The rural local road system primarily provides access to adjacent land and serves travel over relatively short distances.

#### **4.2.2.2 Existing Conditions**

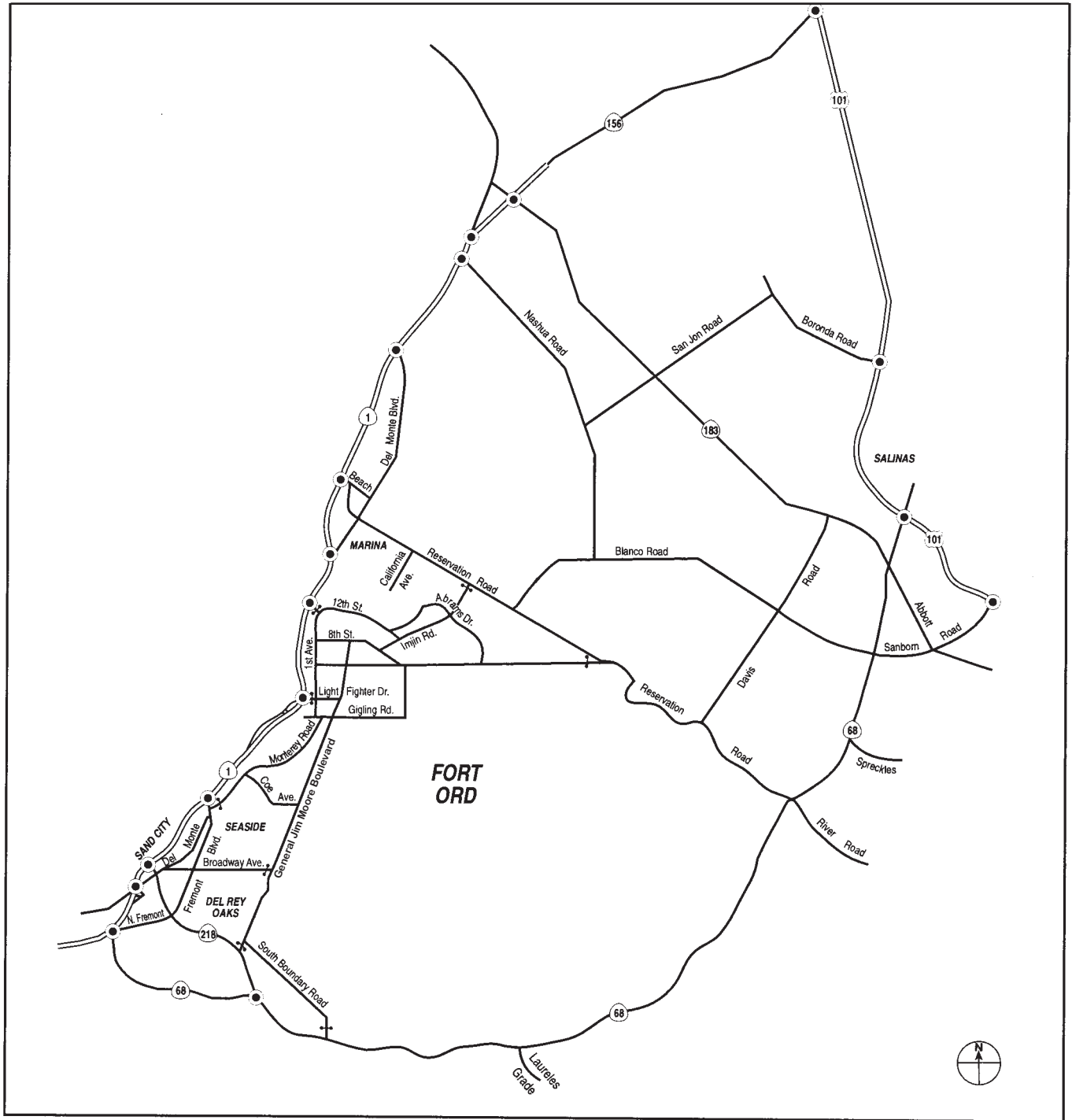
Accessibility and mobility of the former Fort Ord relies upon both its internal roadway network and the network of major regional roadways. Figure 4.2-1 illustrates the primary existing roadway facilities within the former Fort Ord, as well as the elements of the regional roadway network considered most relevant to the former Fort Ord. For this study, the regional network is comprised of all major arterials and state facilities included in the CMP network in the vicinity of the Fort Ord area. The major regional roadways that are most significant for the former Fort Ord are summarized below. A more detailed description of these facilities is provided in Transportation Working Paper #1 prepared for the Fort Ord Reuse Authority by JHK and Associates. The existing (1993/94) daily volumes and LOS for the relevant regional road segments are presented in Table 4.2-2 (along with three future scenarios that are described later in this section). The LOS analysis was based on traffic volumes obtained from TAMC.

**State Highway 1:** State Highway 1 is a major north-south roadway that roughly follows the Pacific Coast from Northern California to Los Angeles and points south. The roadway is aligned immediately to the west of the former Fort Ord, providing access to Watsonville and Santa Cruz (to the north) and Monterey and Carmel (to the south). State Highway 1 is a limited access (freeway) facility from Castroville to just north of Carmel. In the project vicinity, there are freeway interchanges at Reservation Road, Del Monte Boulevard, 1st Ave (12th Street Gate), Light Fighter Drive (Main Gate), and Fremont Boulevard in Seaside.

**State Highway 68:** Within the study area, State Highway 68 is aligned to the south and east of the former Fort Ord, from State Highway 1 to Salinas. State Highway 68 primarily provides access from Salinas to Monterey and areas south of Seaside. South of the study area, State Highway 68 extends west of State Highway 1 into Pacific Grove, and is known as Holman Highway.

**State Highway 156:** State Highway 156 links State Highway 1 (north of Marina) with U.S. 101 to the northeast.

**State Highway 183:** State Highway 183 is aligned roughly east-west to the north of the former Fort Ord.



LEGEND	
	Freeway
	Interchange
	Fort Ord Access Gate

Figure 4.2-1 Existing Transportation Network



**Table 4.2-2  
Regional (Off-Site) Roadway Facilities LOS Summary**

Roadway	Segment	Daily Volume/LOS			
		Existing (1993/94) Condition	No Build Scenario 2015	Financially Constrained Scenario	Optimistic Financing Scenario
<b>State Highway 1</b>	State Highway 68 to Del Monte Blvd (Seaside)	56,000/D	66,700/E	65,000/E	65,000/E
	Del Monte Blvd (Seaside) to State Highway 218	60,000/D	72,700/F	72,200/F	71,900/D
	State Highway 218 to Fremont Blvd	59,000/D	75,000/F	87,500/F	89,000/D
	Fremont Blvd to Main Gate	75,000/D	92,600/E	101,200/F	99,700/E
	Main Gate to 12th Street	65,000/C	77,900/D	80,200/D	79,700/D
	12th Street to S. Marina (Del Monte Blvd)	71,000/C	84,100/D	75,100/D	75,600/D
	S. Marina (Del Monte Blvd) to Reservation Road	35,500/C	41,500/C	48,400/D	48,900/D
	Reservation Road to N. Marina (Del Monte Blvd)	35,500/C	41,200/C	47,400/C	47,600/C
	N. Marina (Del Monte Blvd) to State Highway 156	37,500/C	46,700/C	53,800/D	52,800/D
State Highway 156 to Santa Cruz County line	30,000/E	60,800/F	60,200/F	70,700/F	
<b>State Highway 68</b>	State Highway 1 to State Highway 218	22,800/F	27,600/F	36,300/F	38,700/C
	State Highway 218 to San Benancio Road (Highway)	20,600/F	25,500/F	30,200/F	10,000/B
	State Highway 218 to San Benancio (Freeway Bypass)	N/A	N/A	N/A	21,900/B
	San Benancio Road to Reservation Road	25,000/B	30,800/B	36,000/C	34,600/C
	Reservation Road to E. Blanco Road	29,500/B	34,600/C	43,900/C	42,500/C
<b>State Highway 156</b>	Hwy 1 to 0.1 miles East of Castroville Blvd.	22,000/B	31,060/B	35,600/C	30,900/B
	0.1 miles East of Castroville Blvd. to US 101	25,000/E	31,700/F	26,500/E	35,500/C
<b>State Highway 183</b>	US 101 to Davis Road	29,500/E	47,900/F	37,900/F	38,900/F
	Davis Road to Espinosa Road	16,000/C	33,800/F	32,900/F	30,700/B
	Espinosa Road to State Highway 156	22,000/D	56,800/F	53,300/F	50,900/D
<b>State Highway 218</b>	State Highway 1 to Fremont Boulevard	14,000/D	17,200/D	19,700/D	22,600/D
	Fremont Boulevard to General Jim Moore Boulevard	10,850/B	12,000/F	10,900/D	12,200/C
	General Jim Moore Boulevard to Hwy 68	10,850/D	12,000/D	16,500/B	17,800/B
<b>Del Monte</b>	El Estero to Highway 1	34,300/F	38,900/F	50,000/F	49,300/D
	State Highway 1 to Broadway Ave	27,026/D	26,900/D	29,500/D	29,400/D
	Broadway Ave to Fremont Blvd	9,757/C	10,500/C*	9,400/C	10,000/C
	State Highway 1 (S. Marina) to Reservation Road	28,836/D	37,800/E	29,700/D	29,600/D
	Reservation Road to State Highway 1 (N. Marina)	4,825/A	9,400/B	10,800/B	9,800/B
<b>Fremont Blvd</b>	State Highway 1/State Highway 68 to Broadway Ave	25,166/D	29,200/E	27,200/D	27,500/D
	Broadway Ave to State Highway 1	16,363/C	16,800/C	31,300/F	28,200/D
<b>Broadway Avenue</b>	Del Monte Blvd to Noche Buena Street	13,895/C	14,200/C	16,800/C	16,800/C
	Noche Buena Street to General Jim Moore Boulevard	8,742/C	9,000/C	15,100/C	15,000/C
<b>Reservation Road</b>	Hwy 1 to Del Monte Boulevard	10,205/B	13,800/C	14,800/D	14,800/D
	Del Monte Boulevard to Crescent Ave	26,046/E	33,300/F	31,600/D	30,000/D
	Crescent Ave to Imjin Road	22,874/B	25,600/D	32,300/D	32,300/D
	Imjin Road to Blanco Road	N/A	27,100/C	47,500/D	29,700/C
	Blanco Road to Inter-garrison Road	3,700/A	4,300/A	22,700/B	15,600/B
	Intergarrison Road to Davis Road	4,700/A	4,300/A	24,200/E	15,600/C
	Davis Road to State Highway 68	6,200/A	10,200/B	9,600/B	11,600/B
<b>Blanco Rd</b>	Reservation Road to Davis Road	20,252/E	25,700/F	19,800/E	36,300/C
	Davis Road to State Highway 68	18,836/B	23,500/B	18,400/B	23,100/B
<b>Blanco Rd/ Davis Road</b>	State Highway 68 to US 101	26,600/C	35,100/F	31,100/C	30,700/D
<b>Davis Road</b>	Reservation Road to Blanco Road	7,500/A	10,900/B	23,800/E	14,800/B
	Blanco Road to Rossi Street (Hwy 183)	24,000/E	29,300/E	29,000/E	24,100/E
	Rossi Street (Hwy 183) to US 101	34,829/F	38,300/F	35,900/F	36,300/F



**State Highway 218:** State Highway 218 starts at State Highway 1 in Sand City and provides access through Del Rey Oaks to the southeast where it joins State Highway 68. State Highway 218 is an alternative route to the westernmost segment of Route 68. It also serves areas on the south side of the City of Seaside.

**U.S. 101:** The U.S. 101 freeway is a major north-south route in California. It is aligned to the east of State Highway 1, through Prunedale and Salinas in the vicinity of the former Fort Ord.

**Del Monte Avenue/Boulevard:** Del Monte Avenue/Boulevard is a non-continuous roadway, roughly parallel to State Highway 1, extending from Washington Avenue in Monterey to the interchange with State Highway 1 on the north side of Marina.

**Fremont Street/Boulevard:** Fremont Street/Boulevard is a key four-lane arterial providing an important link through Seaside. It runs north-south, roughly parallel to State Highway 1, and has interchanges with State Highway 1 at either end.

**Broadway Avenue:** Broadway Avenue is a four-lane arterial that provides an east-west connection between Del Monte Boulevard, Fremont Boulevard, and North-South Road.

**Reservation Road:** This facility is aligned approximately east-west, from State Highway 1 past the northern boundary of the former Fort Ord to State Highway 68 south of Salinas. It is currently classified as a rural highway east of Imjin Road, and a signalized arterial from Imjin Road west to State Highway 1.

**Blanco Road:** Blanco Road is an east-west route north of the former Fort Ord that provides a connection between State Highway 101 and Reservation Road. This facility currently provides an important link between the former Fort Ord and Salinas.

**Davis Road:** Davis Road is an arterial between Salinas and Reservation Road, aligned approximately parallel to State Highway 68.

The roadway network within the former Fort Ord consists of a mix of arterial and local roads. The layout is a collage of roadways and parking facilities scattered about to serve the Army's unique needs. The existing roadway system in the former Fort Ord generally consists of four types of roads: two-lane Rural, Residential, Urban Arterial (both four- and six-lane) and Rural Arterial. The two-lane rural roads primarily serve the artillery ranges and remote areas of the Base, examples are: Parker Flats Road and Barloy Canyon Road. These roads are paved but not engineered to any specific standard. The residential streets serve permanent housing areas as well as several mobile home park facilities such as Marshall Park Family Housing and Patton Park Family Housing.

Four and 6-lane urban arterials consist of streets such as Gigling Road, Lightfighter Drive (main entrance road) and the portion of General Jim Moore Boulevard between Lightfighter Drive and Ardennes Circle. These streets have curbs and in some cases sidewalks and a median. Rural arterials such as Inter-



garrison Road, Reservation Road, and the remaining portion of General Jim Moore Boulevard have no curbs, sidewalks, or medians.

Existing roadways within the former Fort Ord provide the foundation for planning the future network within the reuse area. The key existing roadways within the former Fort Ord include 2nd Avenue, Light Fighter Drive, Gigling Road, Imjin Road, Inter-garrison Road, Coe Avenue, General Jim Moore Boulevard, and Eucalyptus Road. These facilities are described below.

**2nd Avenue:** This roadway is a north-south facility aligned east of State Highway 1. It connects Light Fighter Drive east of the Main Gate to 11th Street.

**12th Street:** 12th is an east-west collector road running between Imjin Road and Highway 1. Access to State Highway 1 is provided at the 12th Street interchange.

**8th Street/8th Street Cut-off:** This arterial runs from the railroad tracks just east of Highway 1 eastward toward Imjin Road. Near this location, the roadway turns to a southwest direction and intersects Inter-garrison Road.

**Light Fighter Drive:** Light Fighter Drive is a short east-west arterial that provides access to State Highway 1 via Fort Ord's Main Gate. It also connects to 2nd Avenue and General Jim Moore Boulevard.

**Gigling Road:** This roadway is a east-west facility in the central part of the former Fort Ord, aligned south of Light Fighter Drive. It connects with several north-south streets, including General Jim Moore Boulevard, which provides access to Light Fighter Drive and the Main Gate.

**Imjin Road:** Imjin Road is an arterial roadway running south from Reservation Road through the former Fort Ord where it ends at 8th Street. The northern portion of Imjin is four lanes, narrowing to two lanes in the southern portion.

**Inter-garrison Road:** Inter-garrison Road is an east-west two-lane arterial that provides a connection from Reservation Road to the north-central area of the former Fort Ord, where it becomes 3rd Street. Inter-garrison could become a major east-west facility for the former Fort Ord, and could be used to relieve congestion from the Blanco/Imjin corridor.

**Coe Avenue:** Coe Avenue, a two-lane arterial, currently provides access to Fort Ord areas south of the golf courses from General Jim Moore Boulevard. It starts at General Jim Moore Boulevard and ends immediately west of State Highway 1. Currently, there is no direct connection between Coe Avenue and the freeway, but State Highway 1 can be accessed from Coe Avenue via Monterey Avenue.

**General Jim Moore Boulevard:** This facility is the major north-south roadway through the southern part of the former Fort Ord. It begins north of State Highway 218 and follows the western edge of the former Fort Ord at the Seaside city limits. There is a gate at Broadway, which currently provides access to Seaside. Farther north, General Jim Moore Boulevard intersects Coe Avenue, and continues to an intersection with Light Fighter Drive, which provides access



to the Main Gate. General Jim Moore Boulevard ends at 3rd Street, where it becomes 4th Avenue in central Fort Ord. It is currently a two- to four-lane facility. The roadway has the potential to operate as parallel facility to State Highway 1 providing a link from the Marina area to areas south of Seaside.

**Eucalyptus Road:** This facility begins at the intersection of Coe Avenue and General Jim Moore Boulevard just north of Seaside. It is aligned to the northeast, and the pavement ends at Barclay Canyon Road. While Eucalyptus Road does not currently provide any connections, future improvements in the eastern part of the former Fort Ord may make this an important element in the roadway system.

Currently, the majority of these facilities are relatively low-volume roadways, but will become more important as the base is redeveloped. No current LOS analysis was performed because traffic volumes on internal Fort Ord roadways have been negligible since the base closure.

Access into the former Fort Ord is limited to a number of entry gate locations. Since the closure of the base, many of the gates have remained closed, further limiting access into the Fort Ord area. As the transition to civilian use has begun, some of the gates have been reopened. The gates that are relevant to the Fort Ord Base Reuse Plan are illustrated in Figure 4.2-1 and described below.

- The Main Gate at Light Fighter Drive, east of the State Highway 1 freeway interchange and west of 1st Avenue.
- The 12th Street Gate, across 1st Avenue near 12th Street immediately east of the State Highway 1 freeway interchange.
- The Imjin Gate, at Imjin Road, immediately south of Reservation Road, east of Marina.
- The East Garrison Gate, at Inter-garrison Road, immediately southwest of Reservation Road. (This gate is currently closed to the general public.)
- The Barloy Canyon Road Gate, Barley Canyon Road, immediately north of State Highway 68. (This gate is currently closed to the general public.)
- The North-South Gate, at General Jim Moore Boulevard, immediately north of State Highway 218. (This gate is currently closed to the general public.)
- The Broadway Gate, at Broadway Avenue, immediately west of General Jim Moore Boulevard at the border of Seaside and the former Fort Ord.
- The Ord Gate, at Ord Avenue in the southwest corner of the former Fort Ord south of Coe Avenue and immediately east of State Highway 1.



### 4.2.2.3 Future Conditions

The reuse of the former Fort Ord along with growth throughout the remainder of the region will place increased demands on the roadway system. Enhancements to the roadway network are needed to respond to this increased demand. Within the former Fort Ord this means developing a roadway network to meet the needs of development that, for the most part, does not yet exist. In some instances, particularly in the near term, existing facilities may be used with only minor improvements. In the longer term, upgraded roadways along existing alignments may be necessary. The opportunity also exists for “wiping the slate clean” and developing a new roadway network designed specifically for the Reuse Plan. It is proposed that a combination of these approaches be used for the internal Fort Ord roadway network. For the regional network, there is much less flexibility. For the most part, the layout of the network may be viewed as fixed. Improvements to existing roadway will be needed, with only limited opportunity for the construction of new facilities. In both instances, there are numerous physical, environmental, and financial constraints.

To assist in identifying the roadway needs for buildout of the former Fort Ord, conditions for the Year 2015 were modeled using the Monterey County Transportation Analysis Model (MCTAM). The Year 2015 analysis was used as a guide for developing this plan because regional land use and network forecasts needed to operate the model were not available for “buildout” conditions. Thus, the assessment of buildout roadway needs for the former Fort Ord is based upon a qualitative extrapolation of the Year 2015 results.

Numerous 2015 alternatives were modeled reflecting differing roadway network and land use assumptions. The three scenarios developed are described below.

- “No Build” - the redevelopment of the former Fort Ord was limited to continued POM Annex use. The network included existing roads plus committed off-base projects. This scenario was used to identify the location and magnitude of regional deficiencies that would occur even without the reuse of the former Fort Ord.
- “Build/Financially Constrained” - the proposed Year 2015 redevelopment of the former Fort Ord was modeled along with an internal roadway system designed to meet its needs. Off-site improvements were limited to those currently committed or those on facilities directly adjacent to the base and deemed most critical to the redevelopment of the former Fort Ord.
- “Build/Optimistic Financing” - in this scenario, a number of improvements to the regional system are added to the “Build/Financially Constrained” scenario to achieve LOS goals. A number of alternatives were modeled to identify the preferred roadway network.

Forecasted volumes and service levels for key Regional (off-site) roadway segments under each of these scenarios were presented with the existing

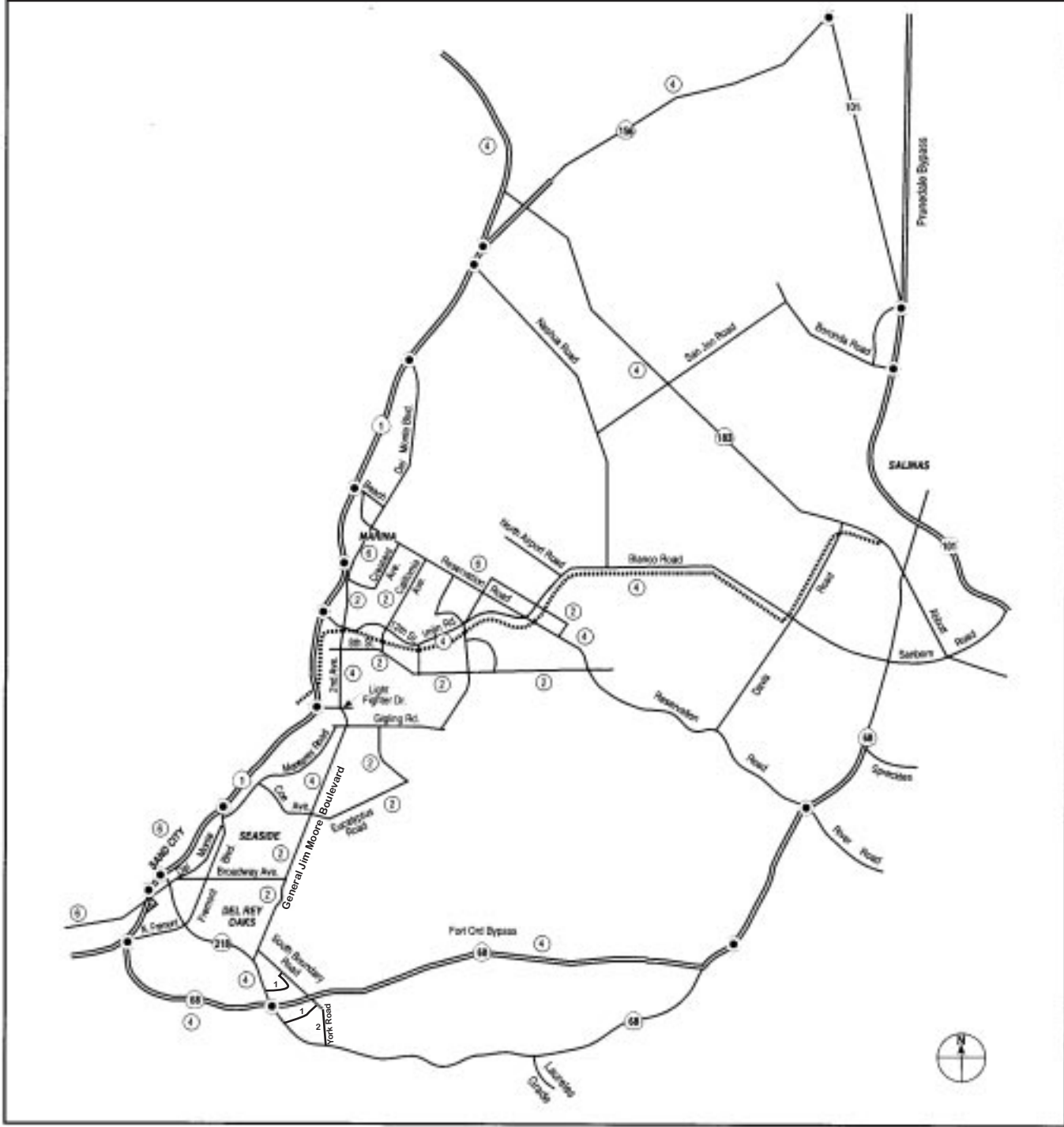


conditions in Table 4.7.2 in the DEIR. Year 2015 volumes and service levels for on-site facilities under both “build” scenarios are presented in Table 4.2-3. Volume and LOS results, as well as segment classification and number of lanes for the individual scenarios are provided in Appendix B of the Draft EIR, Traffic: Background Information. A summary of the specific regional and on-site improvements contained in each scenario is provided in Table 4.2-4.

**Table 4.2-3  
On-Site Facilities LOS Summary**

Roadway	Segment	Daily Volume/LOS		
		Scenario 1A "No Build"	Scenario 2A "Financially Constrained"	Scenario 3F "Preferred"
<b>12th/Imjin</b>	State Highway 1 to California Avenue		20,800/D	19,900/D
	California Avenue to Eastside Road	N/A	12,800/B*	12,500/B*
	Eastside Road to Reservation Road		19,400/B*	7,400/B*
<b>Blanco/Imjin Connector</b>	Eastside to Reservation	N/A	N/A	10,000/B
<b>8th Street</b>	State Highway 1 Overpass to 2nd Avenue	N/A	300/C*	300/C*
	2nd Avenue to Inter-garrison		2,800/C*	2,500/C*
<b>Inter-garrison Road</b>	8th Street to Gigling Connector	N/A	3,500/B*	3,000/B*
	Gigling Connector to Reservation Road		13,100/C	7,400/A
<b>Lightfighter Gigling</b>	State Highway 1 to General Jim Moore Blvd.	N/A	24,400/D	23,500/D
	General Jim Moore Boulevard to Eastside	N/A	16,900/B*	15,200/B*
<b>Coe Avenue</b>	Ord Avenue to General Jim Moore Blvd.	N/A	600/C*	600/C*
<b>2nd Avenue</b>	Del Monte Blvd to 12th Street	N/A	3,900/C*	3,900/C*
	12th Street to Lightfighter		12,100/D*	11,800/D*
<b>General Jim Moore Blvd.</b>	Lightfighter to Gigling	N/A	19,700/D	18,400/D
	Gigling to Coe/Eucalyptus		16,900/B	16,200/B*
	Coe to Broadway		15,500/E	14,900/D
<b>California Avenue</b>	Broadway to State Highway 218		5,500/A	5,400/A
	Reservation Road to 12th Street	N/A	9,600/D	13,200/D
<b>Eastside Road</b>	12th Street to 8th Street		1,700/D	2,100/D
	Imjin to Gigling	N/A	9,900/B	12,100/C

The proposed 2015 roadway network for the Fort Ord area, including the number of lanes on key facilities, is illustrated in Figure 4.2-2. The proposed 2015 network represents a system of roadways, both outside and within the former Fort Ord, that serves the 2015 development in the area. From a regional perspective, the proposed network includes a number of major improvement projects with varying levels of relationship to the reuse of the former Fort Ord. In some instances, these improvements address existing system deficiencies. Others are proposed with the intent of improving access to the former Fort Ord, recognizing the environmental and financial constraints. Key improvements include the widening of State Highway 1 north of Castroville, State Highway 156, State Highway 183, State Highway 218, Blanco Road,







LEGEND	
	Freeway
	Multimodal Corridor ROW
	Interchange
	Number of Lanes
1	The modifications to the Reuse Plan adopted by the FORA Board on June 13, 1997 specify that an 80-foot wide floating easement shall be provided connecting Ryan Ranch Road to South Boundary Road and Upper Ragsdale Drive to South Boundary Road in the York Road Planning Area.
2	The modifications to the Reuse Plan adopted by the FORA Board on June 13, 1997 specify that an 80-foot wide floating easement shall be provided connecting Ryan Ranch Road to South Boundary Road and Upper Ragsdale Drive to South Boundary Road in the York Road Planning Area.

Figure 4.2-2  
**Proposed 2015  
 Transportation Network**



Reservation Road, and Del Monte Boulevard, and the construction of the State Highway 68 Bypass Freeway and the Prunedale Bypass.

The roadway element includes the designation of the arterial roadways that will provide circulation within the reuse area. In general, this system of major roads provides access to the regional network via the existing entrance locations at 12th Street, Main Gate (Light Fighter), Imjin Road, Inter-garrison Road, Broadway Avenue and General Jim Moore Boulevard at State Highway 218 as well as a new access point via 2nd Ave. Within the base, these roads connect the entrance points and provide for internal circulation. The proposed internal roadway network for buildout of the former Fort Ord is illustrated in Figure 4.2-3. The arterial component of the roadway element within the former Fort Ord consists of the facilities described below.

**12th Street/Imjin Road:** This remains a key corridor between State Highway 1 and Reservation Road in the former Fort Ord. For the 2015 proposed network this facility will be four lanes from State Highway 1 to Reservation Road.

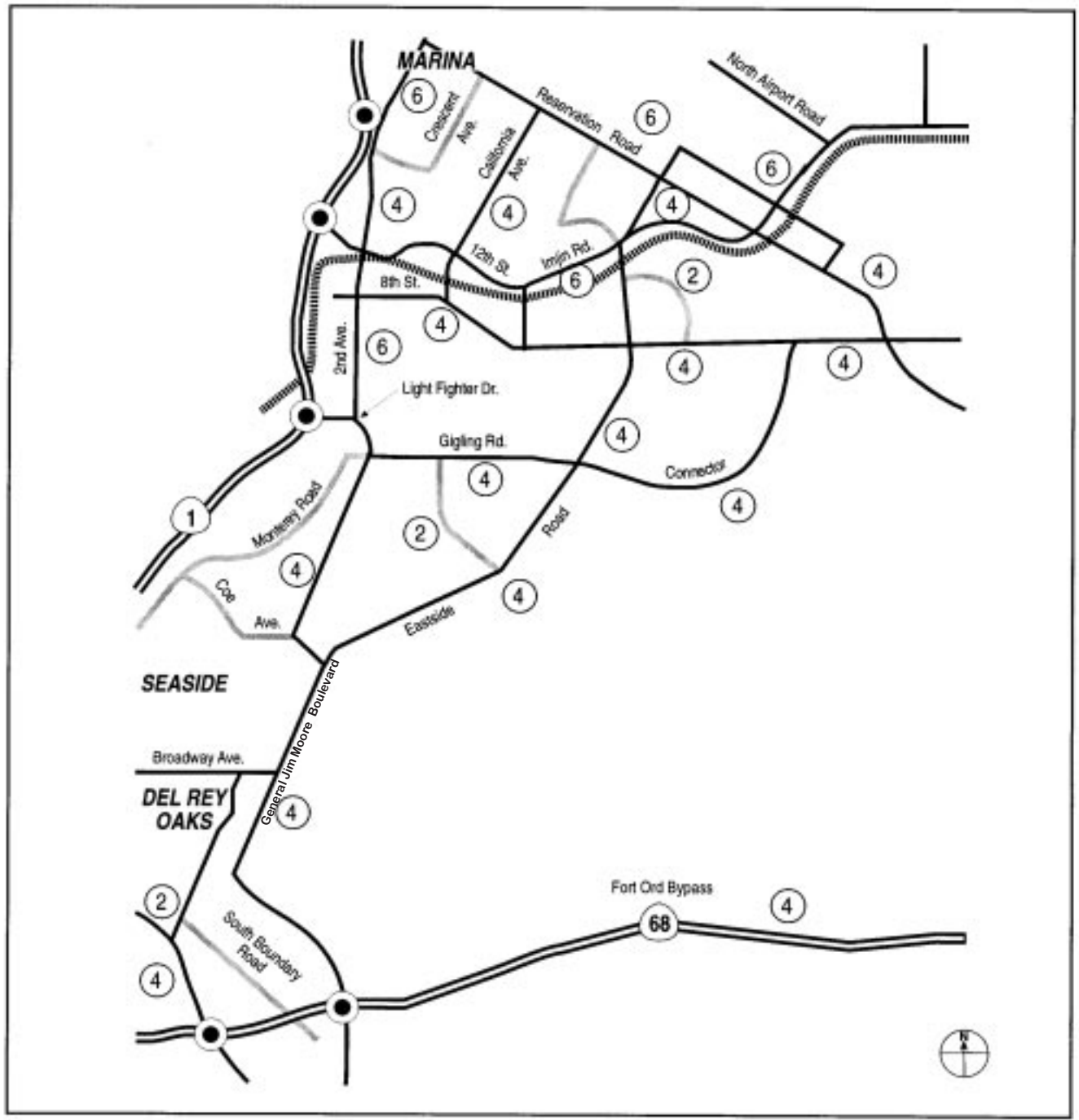
In addition, a new two-lane roadway is proposed connecting the Reservation/Blanco intersection to Imjin near the intersection with Eastside. This roadway, termed the Blanco/Imjin Connector, would provide direct access onto the former Fort Ord from Blanco.

For the buildout network, it is expected that this facility will be six lanes from State Highway 1 to Eastside Road and will include an upgraded interchange at State Highway 1. The connector would be widened to four lanes at buildout.

**Gigling Road/Inter-garrison Connector:** Gigling Road would serve as the major roadway serving the area immediately south of the CSUMB campus. In the 2015 proposed network, this facility would exist as a four lane arterial from General Jim Moore Boulevard to Eastside Road. In the buildout network, it is anticipated that a four-lane connector to Inter-garrison will be built.

**Inter-garrison Road/8th Street:** This facility is intended to be more attractive to drivers for accessing the southern portion of the reuse area from the east, thus reducing the demand on Blanco Road and the 12th Street/Imjin Road corridor. West of the connection to Eastside Road, however, Inter-garrison Road would be de-emphasized as major vehicular route with greater emphasis placed on pedestrian and bicycle traffic. This entire facility is two lanes in the 2015 proposed network, and four lanes in the ultimate buildout network. Between the CSUMB campus and the designated mixed-use area, 8th Street would possess design features (i.e., intersection and signal spacing) that reflect an urban, circulatory character. These urban design features will apply to this facility west of the Inter-garrison Connector in the ultimate building network.

**2nd Ave./General Jim Moore Boulevard:** This corridor would serve as the north-south spine through the reuse area. It will provide a connection from Del Monte Boulevard in Marina to State Highway 218 in Del Rey Oaks. The 2nd Avenue portion of this corridor would serve the key commercial and mixed-use development areas within the former Fort Ord. This facility would be









LEGEND	
	Freeway
	Arterial
	Collector
	Multimodal Corridor ROW
	Interchange
	Number of Lanes

Figure 4.2-3  
Buildout Transportation Network



**Table 4.2-4  
Roadway Design Standards**

	<b>Rural Arterial</b>	<b>Rural Local</b>	<b>Urban Arterial</b>	<b>Urban Collector</b>	<b>Urban Local</b>
<b>No. of Lanes</b>	4	2	4-6	2-4	2
<b>Design Traffic Volume</b>	1800 VPHPL	<5000 ADT	1200 VPHPL	<10000 ADT	<2000 ADT
<b>Design Speed</b>	65 MPH	55 MPH Pref. 40 min	45-65 MPH	25-35 MPH	25 MPH Min.
<b>Stopping SD</b>	725 ft	325-550 ft	400-725 ft	150-250 ft	150 ft
<b>Passing SD</b>	2000 ft	1500-1950 ft	N/A	N/A	N/A
<b>Alignment Minimum Radius</b>	1600ft	300ft	1500ft	600ft	300ft
<b>Grade Profile Grade</b>	3-5% max for level & rolling terrain	6-9% for level & rolling terrain	5-8% max	9-11% max 0.40% min	Residential: <15% Comm/Indust: <8%
<b>Cross Slope</b>	2% or standard superelevation per Caltrans HDM	2% or standard superelevation per Caltrans HDM	2% except, standard superelevation for expressway	0.50% min desirable 2%	<5% desirable 2%
<b>RW Width (w/o slopes)</b>	110ft	60ft	122ft - 138ft	64ft - 94ft	56ft
<b>Vertical Clearance</b>	16.5ft 15ft ok if allowed by local ordinance	15ft	16.5ft 15ft ok if allowed by local ordinance	15ft	15ft
<b>Signing and Pavement Delineation</b>	Per Caltrans Traffic Manual	Per Caltrans Traffic Manual	Per Caltrans Traffic Manual	Per Caltrans Traffic Manual	Per Caltrans Traffic Manual

**Abbreviations**

- ADT Average Daily Traffic
- VPHPL Vehicles Per Hour Per Lane
- R/W Right of Way
- MPH Miles per Hour
- SD Sight Distance

Source: Fort Ord Reuse Infrastructure Study - Traffic Safety Standards (HMH, Incorporated)

designed to emphasize its role in serving as the primary circulation and access route for these areas, and de-emphasize it as an alternative to State

For the 2015 proposed network, this facility will be two lanes on the 2nd Ave segment from Del Monte to 12th street and on the North-South Road segments from Coe/Eucalyptus to State Highway 218. The remaining segments of 2nd Ave and General Jim Moore Boulevard will be four lanes. For buildout network, the portion of 2nd north of 12th would be widened to four lanes, while the segment south of 12th to Gigling would be six lanes.

**Eastside Road:** For 2015 a new two lane facility is proposed between Imjin and Gigling along the eastern portion of the primary redevelopment area in the former Fort Ord. Access to State Highway 68 would be via State Highway 218 and the existing General Jim Moore Boulevard. Improvements to each of these segments are proposed to support this circulation pattern. In its ultimate



form, this facility would provide a four lane connection between the proposed State Highway 68 freeway, around the east side of the CSUMB campus, to Imjin Road. A connection to the General Jim Moore Boulevard/Coe Avenue intersection would be built along with this facility. Eastside Road would serve as a primary southwest-northeast corridor. In this manner, it would serve to reduce demand along State Highway 1, 12th Street and the Del Monte/2nd/General Jim Moore Boulevard corridor.

**California Ave.:** In the 2015 proposed network, California Ave would be extended south from Marina as far as 8th Street as a two lane arterial. For buildout, this facility will be upgraded to a four lane arterial to serve as a key access and circulatory route in the Marina Village area.

**City of Marina Access:** Under the proposed reuse plan, access to the former Fort Ord from other areas of Marina would be provided via regional facilities to existing gates off State Highway 1 and Reservation Road. The proposed plan includes additional access via Del Monte Boulevard and Abrams Drive, and the extensions of Salinas Avenue and California Avenue.

**City of Seaside Access:** From Seaside and the Monterey Peninsula, access is provided off State Highway 1, with primary local access via Broadway Avenue. Secondary access would be provided via Coe Avenue, but use of this route is to be limited due to constraints at the Fremont Boulevard/Coe Avenue interchange. In recognition of this, the proposed plan does not include the upgrading and widening of Coe between Fremont and General Jim Moore Boulevard contained in the FORIS plan.

#### **4.2.2.4 Objectives**

*Objective A: An efficient regional network of roadways that provides access to the former Fort Ord.*

To a large extent, the attractiveness of the former Fort Ord for redevelopment within the national marketplace will depend on the ability of the regional transportation system to provide for efficient intra- and inter-regional travel. Critical facilities include those most proximate to the former Fort Ord (State Highway 1, Reservation Road, Del Monte Boulevard, Fremont Boulevard), those that connect to Salinas (State Highway 68, Blanco Road, Davis Road), and those to the north that provide connections to Santa Cruz and the Bay Area (State Highway 1, State Highway 156, U.S. 101). As identified previously, a number of these facilities are currently operating at or near deficient levels of service. Regional growth and the redevelopment of the former Fort Ord will result in the worsening of these conditions. Thus, efforts and improvements that address the efficient operation of these facilities are required.

Adding system capacity through roadway improvements represents the most direct means of mitigating the impacts of increased demand. The operating analysis presented above identified those roadway facilities forecast to operate at deficient service levels in 2015 (see Table 4.2-2). This analysis also resulted in the identification of roadway improvements needed to achieve or maintain



acceptable service levels. A listing of these improvements was provided with varying levels of relationship to the reuse of the former Fort Ord. In some instances, these improvements address existing system deficiencies or future deficiencies to which the former Fort Ord has an insignificant contribution.

A key step in the transportation analysis process was the identification of the former Fort Ord contribution to the volume increases on the regional roadways examined in this study. This analysis, termed a “nexus” test, was used to determine the former Fort Ord’s share for each of the proposed improvements. This information was in turn used to develop a funding mechanism by which Fort Ord development would pay for its share of the impact on the regional transportation system. Because funding for the non-Fort Ord share may not always be available, the option exists for the use of Fort Ord-generated funding to cover the entire cost of selected improvements to facilitate their implementation. In this situation, the total Fort Ord contribution to all improvements would remain the same as that determined by the nexus test.

*Objective B: Provide direct and efficient linkages from former Fort Ord lands to the regional transportation system.*

The former Fort Ord will generate and attract a large number of intra- and inter-regional trips. This requires that high quality connections between the regional network and the internal network be provided. Provision of multiple connections will provide the opportunity for trips to more directly go between their origin and destination. As a result, this will reduce vehicle miles of travel (VMT) and emissions and avoid overloading a small number of facilities. It is important that these connections be between arterial and higher class roadways to avoid excessive volumes on local streets. Furthermore, this interface must take into consideration the movement of goods along designated truck routes.

Connections identified within the proposed plan include those at 12th Street/State Highway 1, Lightfighter/State Highway 1, Coe/Fremont, General Jim Moore Boulevard/Broadway, General Jim Moore Boulevard/State Highway 218, Eastside/State Highway 68, Inter-garrison/Reservation, Imjin/Reservation, California, and 2nd Avenue/Del Monte.

*Objective C: Provide a safe and efficient street system at the former Fort Ord.*

In addition to an efficient regional network, it is important that the internal roadway network operate in a safe and efficient manner. Although a road system exists, it was designed for military uses. The reuse of most areas provides the opportunity to redesign the roadway network to meet these new needs. The roadway system must provide access to areas identified for redevelopment and do so as directly and efficiently as possible. Part of the efficiency is recognizing that different roads will serve different functional purposes. Another element is maintaining acceptable service levels to provide mobility. An efficient system operates with little or no congestion, thus limiting negative impacts such as delay, vehicle emissions, and intrusion into residential areas.





*Objective D: Provide an adequate supply of on-street parking*

An adequate supply of parking provides important economic services to developments. Additionally, sufficient parking helps maintain efficient traffic circulation by minimizing the traffic created by drivers circulating in search of parking spaces. On-street parking provided as part of the streets and roads system is an important component of the parking supply at the former Fort Ord.

#### **4.2.2.5 Streets and Roads Policies and Programs**

*Objective A: An efficient regional network of roadways that provides access to 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).

**Program A-1.1:** Each jurisdiction through FORA's DRMP, shall fund its "fair share" of "on-site," "off-site" and "regional" roadway improvements based on the nexus analysis of the TAMC regional transportation model. The nexus is described in the Public Facilities Improvement Plan, Volume 3 of the Reuse Plan, as amended from time to time. The nexus has been updated to reflect TAMC's re-prioritizing of improvements in the network and is reported in the "Fort Ord Regional Transportation Study," prepared by TAMC, January 6, 1997.

**Program A-1.2:** FORA will retain the flexibility to build roadway improvements to the "on-site" and "off-site" network, as described in the Reuse Plan to serve development activities at the former Fort Ord. FORA will participate in reimbursement programs to recover expenses beyond Fort Ord's fair share when alternative programs for financing roadway and transit improvements are established.

**Program A-1.3:** Each jurisdiction, through FORA's DRMP shall participate in a regional transportation financing mechanism if adopted by TAMC, as provided in 3.11.5.3(a) of the DRMP. If not, FORA will collect and contribute Fort Ord's "fair share" to construction of a roadway arterial network in and around the former Fort Ord. FORA's participation in the regional improvements program constitutes mitigation of FORA's share of cumulative impacts.

**Program A-1.4:** In order for FORA to monitor the transportation improvements and to prevent development from exceeding FORA's level of service standards, each jurisdiction shall annually provide information to TAMC and FORA on approved projects and building permits within their jurisdiction (both on the former Fort Ord and outside the former base), including traffic model runs, traffic reports, and environmental documents.

*Objective B: Provide direct and efficient linkages from former Fort Ord lands to the regional transportation system.*



**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.

**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.

**Program B-1.2:** Each jurisdiction shall identify and coordinate with FORA to designate local truck routes to have direct access to regional and national truck routes and to provide adequate movement of goods into and out of former Fort Ord.

*Objective C: Provide a safe and efficient street system at the former Fort Ord.*

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

**Program C-1.1:** Each jurisdiction shall assign classifications (arterial, collector, local) for each street and design and construct roadways in conformance with the standards provided by the Reuse Plan (Table 4.2-4 and Figure 4.2-4).

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

**Program C-1.3:** Each jurisdiction shall assign an appropriate threshold performance standard for its roadway system in order to measure the impacts of future growth on the system.

**Program C-1.4:** Each jurisdiction shall design and construct the roadway network consistent with the phasing program identified in the Fort Ord Business and Operations Plan (Appendix B of the Reuse Plan).

**Program C-1.5:** Each jurisdiction shall designate arterials and roadways in commercially zoned areas as truck routes.

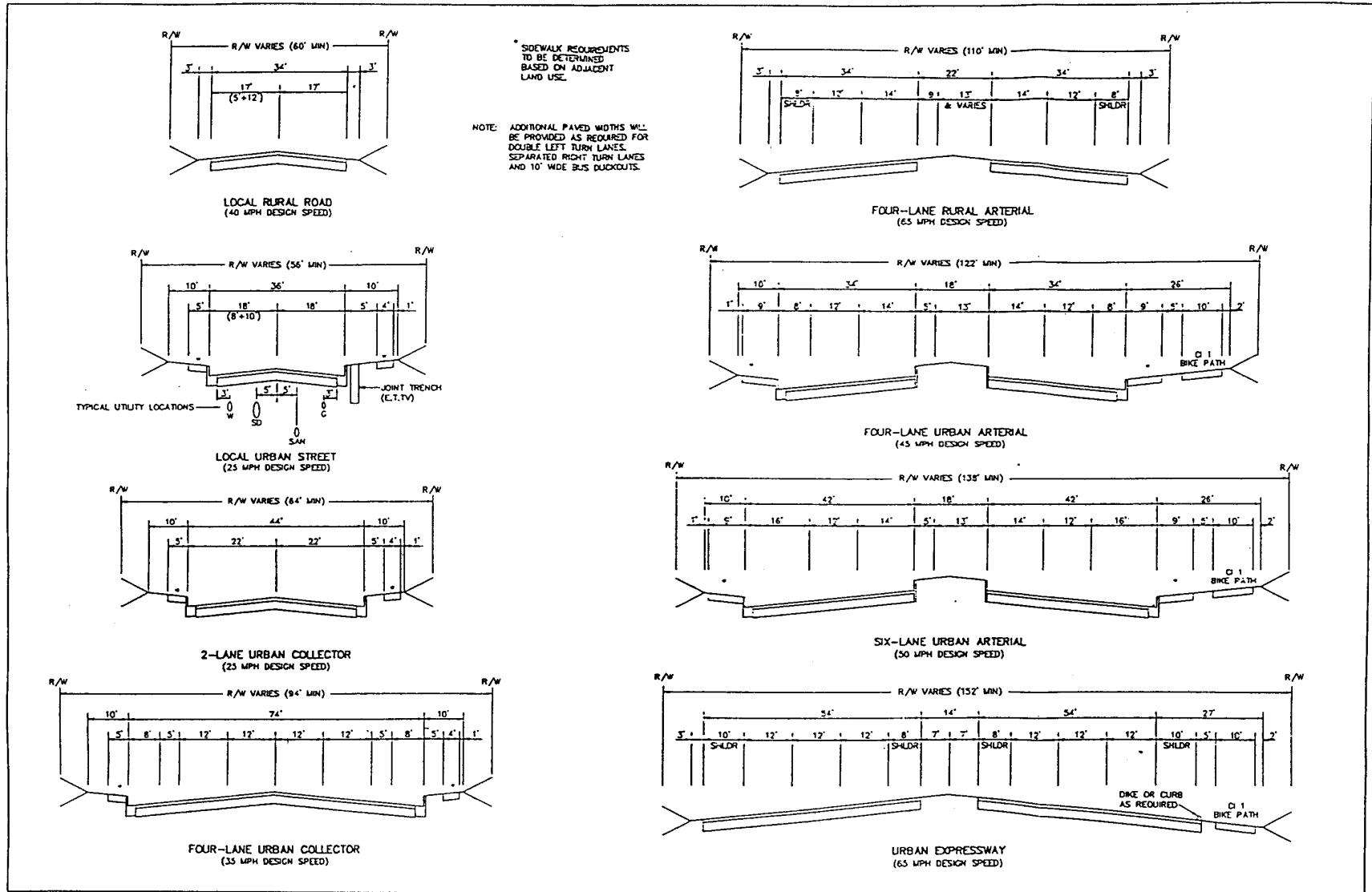
**Streets and Roads Policy C-2:** Each jurisdiction shall provide improvements to the roadway network to address high accident locations.

**Program C-2.1:** Each jurisdiction shall collect accident data, identify and assess potential remedies at high accident locations and implement improvements to lower the identified high accident rates.

*Objective D: Provide an adequate supply of on-street parking*

### **Roadway Design Standards**

**Streets and Roads Policy D-1:** Each jurisdiction shall provide a program of on-street parking.



Source: FORIS - Traffic Safety Standards, (HMH, Inc.)

Figure 4.2-4  
Roadway Design Standards



**Program D-1.1:** Each jurisdiction shall provide on-street parking, as appropriate, with design and construction of all urban roadways.

**Program D-1.2:** Each jurisdiction shall provide adequate parking in urban areas for persons with disabilities, either as on-street parking on urban roadways or as on-site parking.

**Program D-1.3:** Each jurisdiction shall evaluate all new development proposals for the need to provide on-street parking as a part of the overall on-street parking program.

### 4.2.3 Transit

Transit service is essential to the circulation system as an alternative to auto transportation. It is especially important for the elderly, students, the disabled, and others who cannot drive or who do not have access to an automobile. Also, it can be an attractive transportation alternative for those who want to avoid the cost, stress, and delays of driving, and the nuisance of parking. Transit vehicles are generally less polluting on a per passenger basis, and can help to lessen roadway congestion.

Expanding transit service makes transit more accessible to more people. Providing more people with easy access to transit may increase transit market share, and can be accomplished by making service improvements (altering and expanding transit routes, schedules, and equipment), operational changes, or changes in fare policy.

Bus and rail transit are both potentially viable options as transit service is expanded to serve the former Fort Ord. The aggregate impact of an effective fixed-route transit system (i.e., rail) complemented by lower-capacity transit vehicles (i.e., buses) can be a logical and reasonable alternative to automobile use in areas where there is sufficient housing and employment.

#### 4.2.3.1 Existing Conditions

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. Not all bus stops have shelters.

RIDES is a countywide transit program for persons with disabilities and elderly people who cannot ride MST. The service provides wheelchair life-equipped vans Monday through Friday between 7:00 a.m and 11:00 p.m. A taxi

reimbursement programs is available for all other times. Passenger train service is currently only available through Amtrak's Coast Starlight Service in Salinas, with connections to the San Francisco Bay Area and beyond.

#### **4.2.3.2. Objectives**

*Objective A: Provide convenient and comprehensive bus service.*

Transit is most effective when stops are located where many people live (e.g., residential neighborhoods) or wish to travel (e.g., employment centers), and where routes connect these places. For the former Fort Ord, the key activity centers will be the high concentration areas, which will include the mixed use villages, UC MBEST, CSUMB, and the intermodal center. The primary transit corridors will be the Salinas-Fort Ord corridor (on Blanco, Davis, and Reservation Roads) and the Fort Ord-Seaside-Monterey Peninsula corridor (on State Highway 1 and Del Monte Boulevard).

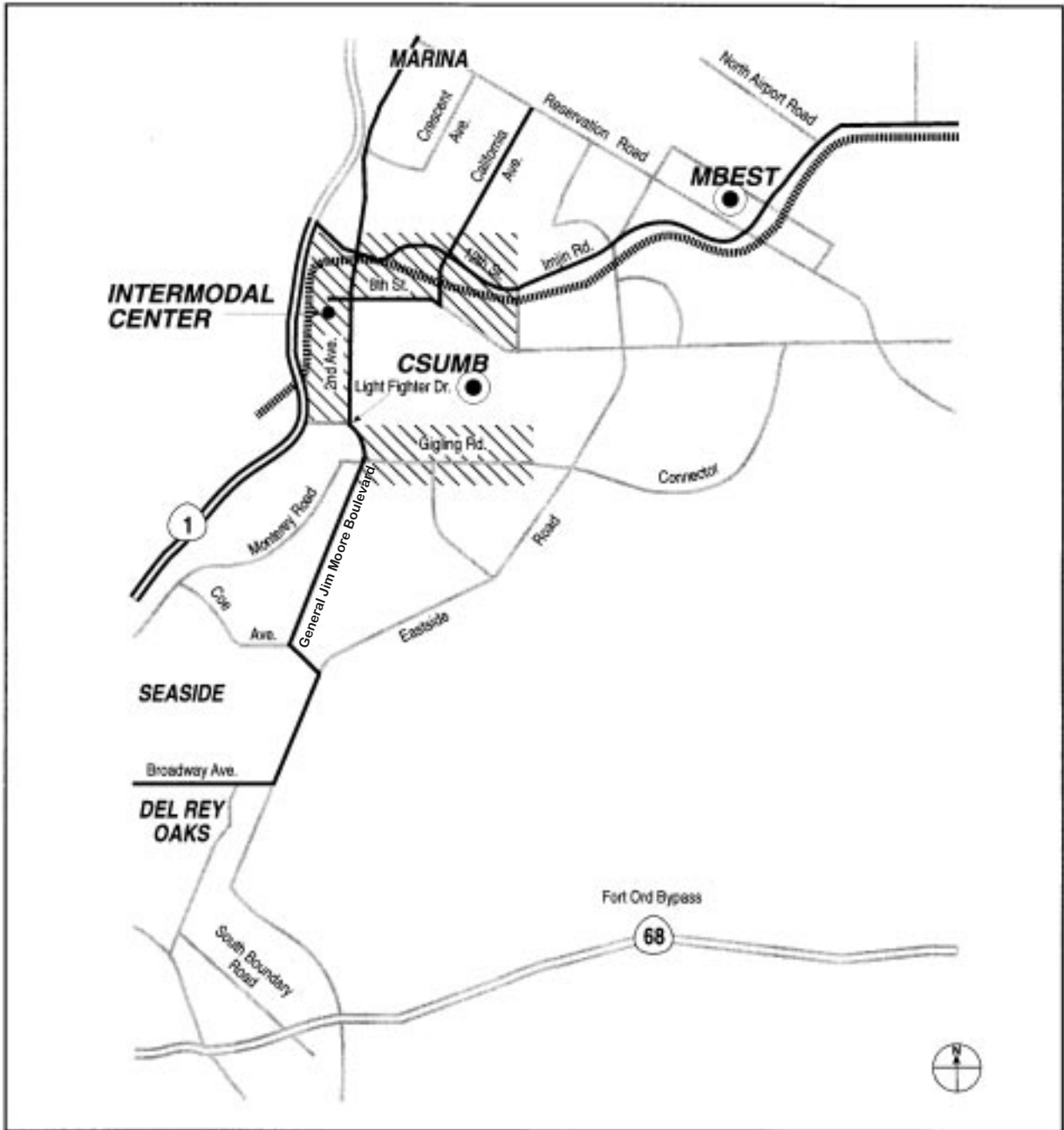
Figure 4.2-5 illustrates the key activity centers and corridors that are prime candidates for high-quality bus service. These centers represent areas of high volume and concentration trip-making. The corridors connect these centers and carry a majority of the trips to and within the former Fort Ord.

*Objective B: Promote passenger rail service that addresses transportation needs for the former Fort Ord.*

The Intercity Passenger Rail Feasibility Study was completed in 1993. It examined options for connecting the Monterey Peninsula with the San Francisco Bay Area via existing Amtrak and Caltrain services. The study examined weekend and summertime excursion service options as well as daily intercity peak-period commute service options using both direct and transfer service. This planning effort led to discussion of a potential direct rail connection between Salinas and the former Fort Ord, with possible extension to the Monterey Peninsula. This connection would require new track as none currently exists in this corridor, but would serve a primary intra-regional travel pattern. TAMC is currently studying this proposal in more detail. (supplement discussion with recent TAMC work on this issue)

*Objective C: Promote intermodal connections that address the transportation needs for the former Fort Ord.*

A transit or intermodal center located in the former Fort Ord is viewed as a critical facility for the region. An Intermodal Centers Siting Study, completed in January 1995, recommended developing a facility east of State Highway 1, between the railroad undercrossing and the 12th Street Gate. Based on further evaluation from the land use plan, an alternative site has been recommended for further consideration at 8th Street. This site would effectively support the mixed-use area as well as recreational travel to Fort Ord Dunes State Park.



LEGEND	
	Freeway
	Key Transit Corridor
	Multimodal Corridor Right-of-Way
	Activity Center
	High Density / Mixed-Use Areas

Figure 4.2-5  
Transit Activity Centers and Corridors

### 4.2.3.3 Transit Policies and Programs

*Objective A: Provide convenient and comprehensive bus service.*

**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.

**Program A-1.1:** Each jurisdiction shall identify key activity centers and key corridors, coordinate with MST to identify bus routes that could serve former Fort Ord, and support MST to provide service responsive to the local needs.

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

**Program A-1.3:** Each jurisdiction shall identify the need for transit/paratransit services for the elderly and disabled and coordinate with and support MST to implement the needed transit services.

**Program A-1.4:** MST shall coordinate with the Santa Cruz Metropolitan Transit District to provide an integrated intercounty bus transit system.

**Program A-1.5:** Existing rideshare programs shall be expanded to accommodate intercounty travel.

*Objective B: Promote passenger rail service that addresses transportation needs for the former Fort Ord.*

**Transit Policy B-1:** Each jurisdiction shall support TAMC and other agencies to provide passenger rail service that addresses transportation needs for former Fort Ord.

**Program B-1.1:** Each jurisdiction shall support TAMC and other agencies to assess the need, feasibility, design and preservation of rights-of-way for passenger rail service that addresses transportation needs at former Fort Ord.

*Objective C: Promote intermodal connections that address the transportation needs for the former Fort Ord.*

**Transit Policy C-1:** Each jurisdiction shall support the establishment of intermodal centers and connections that address the transportation needs at former Fort Ord.

**Program C-1.1:** Each jurisdiction shall coordinate with and support TAMC and MST to identify the need, location, and physical design of intermodal centers and regional and local transportation routes to connect with the intermodal centers.

### 4.2.4 Pedestrian and Bicycles

Non-motorized modes of travel are an important focus for the Fort Ord circulation system. The two most common non-motorized modes of travel are walking (pedestrian) and bicycling. Both pedestrian and bicycle travel are



non-polluting, do not contribute to roadway congestion, and are healthy alternatives to vehicular travel. People often find walking and bicycling to be pleasant experiences when they have clearly defined facilities and feel safe using them.

A critical factor in promoting pedestrian activity is to have land uses that permit trips that can be easily and safely walked. Some examples of pedestrian-friendly land uses are a mixture of uses located in proximity to one another, or transit stops placed near residential areas. Creating an interesting pedestrian environment with landscaping and minimal building setbacks in commercial areas also helps to encourage pedestrian activity. However, people will not take pedestrian trips if safe places to walk are not provided. By providing pedestrian facilities and routes, walking can be encouraged as an alternative to vehicle use. Similarly, bicycle transportation can be encouraged with the right mixture of land uses and good bicycle routes. To be a feasible alternative to driving, bicycling must be convenient and safe.

### **4.2.4.1 Existing Conditions**

Sidewalks currently exist on some Fort Ord roadways, but a comprehensive network of pedestrian facilities is not in place. No sidewalks are available on Inter-garrison Road or Imjin Road, and are missing on parts of Lightfighter Road, Gigling Road, and General Jim Moore Boulevard. Also, on many Fort Ord roadways, there are no shoulders or parking lanes, so vehicular traffic may pass close to pedestrians even where sidewalks do exist.

Access to Marina and Seaside from the former Fort Ord is limited to a number of entry gates. Since the closure of the base, many of the gates have remained closed, although some of the gates have been reopened as the transition to civilian use has begun. For pedestrians, however, access is severely limited. Most of the gates are designed for vehicular access from State Highways 1, 218, or 68, which are not good pedestrian facilities. The two best gates for pedestrians are the Imjin Gate (on Imjin Road south of Reservation Road) that provides access to Marina; and the Broadway Gate (on Broadway Avenue west of General Jim Moore Boulevard) that provides access to Seaside. Unfortunately, there are no sidewalks in the former Fort Ord on the main roads (Imjin Road and General Jim Moore Boulevard) in the vicinity of these gates.

Currently, there are no bicycle facilities within the former Fort Ord. TAMC has developed a General Bikeways Plan (January, 1994), which describes current and proposed bicycle facilities in Monterey County. There are a limited number of bicycle facilities in the vicinity of the former Fort Ord. The most significant is the Caltrans Pacific Coast Bikeway, which roughly follows the coastline. It is aligned along Del Monte Boulevard through Marina, and then it follows State Highway 1 past the former Fort Ord and into Seaside and Sand City. There are, however, no connections to the Pacific Coast Highway from the former Fort Ord, and there are no other bicycle facilities within the former Fort Ord or connecting to Marina or Seaside. Also, at present there are no designated bicycle networks in either Marina or Seaside.



The General Bikeways Plan recommends the development of a regional bicycle map, and the creation of a Fort Ord Bicycle and Pedestrian Plan. The plan also identifies a number of bicycle improvement projects that are recommended by the TAMC Bicycle and Pedestrian Committee. Within the former Fort Ord, the recommendations include bikeways on Eucalyptus Street, General Jim Moore Boulevard, South Boundary Road, Inter-garrison Road, and the South 1st Street Bridge.

#### **4.2.4.2 Objectives**

*Objective A: Provide a pedestrian system that supports the needs of Fort Ord residents, employees, students, and visitors.*

Pedestrians, especially seniors and adults with small children, should feel safe and secure from traffic if walking is to be encouraged. Sidewalk widths, signal timing, intersection configuration, and proximity to heavy traffic all need to be considered.

*Objective B: Provide a bicycle system that supports the needs of Fort Ord residents, employees, students, and visitors and is integrated into a regional bike system.*

The Bicycle Classification System should be used as a guide for developing bicycle lanes in the former Fort Ord. The Caltrans Highway Design Manual designates three types of bikeways. (Bikeway is the general term for any marked bicycle facility.) Each of the three types of bikeways has standards for width, signs, and pavement markings:

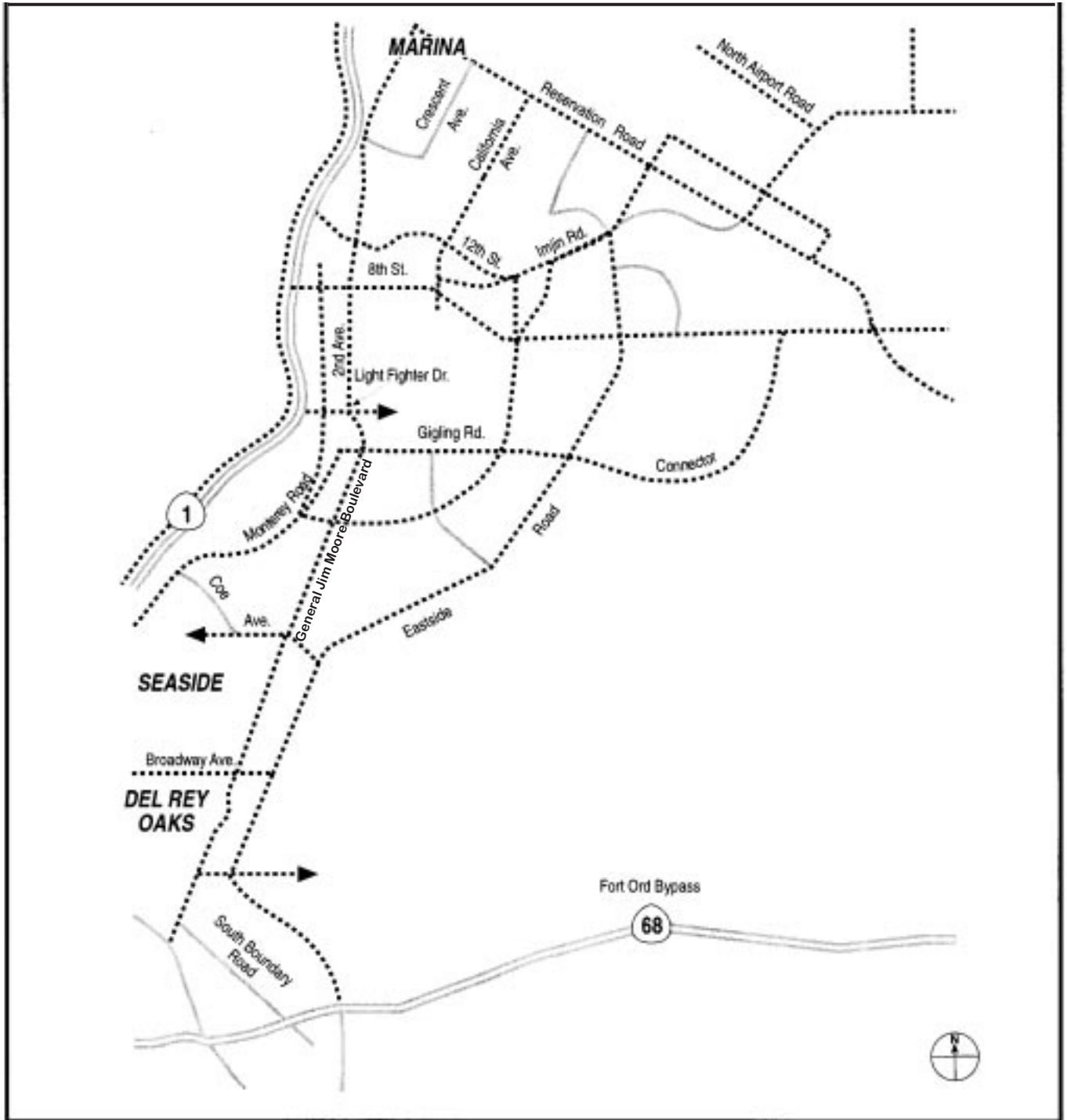
- Class I (Bike Path): Bicycles travel on a right of way completely separated from any street or highway.
- Class II (Bike Lane): Bicycles travel in a one-way striped lane on a street or expressway.
- Class III (Bike Route): Bicycles share the road with pedestrians and motor vehicle traffic. Bike routes are marked only with signs.

Figure 4.2-6 illustrates the proposed bicycle network for the former Fort Ord, including facilities identified as Recreational Bike Trails. Additional information on these trails is provided in the Recreational Element of this plan.

Where Class I separate bike paths are not provided, Class II bike routes should be striped and marked along urban collectors and local streets where designated on an integrated bikeway master plan. Other two-lane local streets and all rural roadways should include shoulders adequate for bicycle use.

Easily accessible and well-designed bicycle parking can encourage people to ride their bicycles to work, shopping, school, and community facilities. Bicycle racks and lockers protect bicycles from theft and bad weather.

They also clearly define where bicycles should be parked so they won't impede pedestrians or damage trees and other stationary objects put into service as bicycle racks. Established bicycle parking also reinforces the image that bicycles are a socially-approved way to travel.





LEGEND	
	Arterial Bicycle Route
	Recreational Bicycle Trail

Figure 4.2-6  
Proposed Bicycle Network



### **4.2.4.3 Policies and Programs**

*Objective A: Provide a pedestrian system that supports the needs of Fort Ord residents, employees, students, and visitors.*

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

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

*Objective B: Provide a bicycle system that supports the needs of Fort Ord residents, employees, students, and visitors.*

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

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

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

## **4.2.5 Transportation Demand Management**

### **4.2.5.1 Existing Conditions**

There is no existing transportation demand management (TDM) program in place for the former Fort Ord. TDM measures should be pursued in conjunction with the redevelopment of the military base.

It is clear that the redevelopment of the former Fort Ord, plus growth throughout the remainder of Monterey County and the region, will significantly increase the demand placed on the region's transportation infrastructure and services. To some extent, the increases in travel demand will be managed by building or improving transportation facilities, but there also exists a variety of concepts and objectives that can be used to minimize the demand for vehicle trips as an alternative to increasing roadway capacity. TDM attempts to reduce the number of people who drive alone, and to increase the number of people who walk and who use carpools, vanpools, transit, and bicycles. The approach being taken as part of the Fort Ord Reuse Plan seeks to balance these two elements to achieve a transportation system that is both financially feasible and operationally acceptable.



### 4.2.5.2 Objectives

*Objective A: Deemphasize the need for vehicle travel to and within the former Fort Ord.*

TDM measures can be implemented that deemphasize SOV use and encourage walking, bicycling, car/vanpooling, and transit ridership (mode shift); reduce peak period travel (time shift); reduce VMT and/or reduce person trips. Overall, these strategies will result in fewer vehicles on the roadway, especially during the more congested periods of the day. The encouragement of non-vehicle travel is an important component of developing a pedestrian-oriented environment for the former Fort Ord. TDM is not restrict to work-related trips. It is anticipated that there will be a great deal of non-work-related travel, especially with the presence of CSUMB and related student travel, therefore, TDM measures should be examined that address all trips. Many TDM measures are interrelated with the land use planning for the former Fort Ord.

### 4.2.5.3 Policies and Programs

*Objective A: Deemphasize the need for vehicle travel to and within the former Fort Ord.*

**Transportation Demand Management Policy A-1:** TDM programs shall be encouraged.

**Program A-1.1:** Promote TDM programs at work sites.

Specific measures that can be pursued at the work site include: compressed work weeks, staggered/flexible work hours, telecommuting, on-site ridesharing, public transit subsidies, guaranteed ride home, bicycle facilities, and parking pricing.

**Program A-1.2:** Promote TDM programs in residential developments, retail centers, and other activity centers.

**Program A-1.3:** Require new development to incorporate design features that will strengthen TDM programs.

**Program A-1.4:** Enforce CMP trip reduction programs.

## 4.2.6 Land Use and Transportation

### 4.2.6.1 Existing Conditions

Local land use planning is another method of managing regional traffic growth as well as local traffic problems. This General Plan includes land use polices aimed at providing the former Fort Ord with a cohesive community through:

- identifiable centers to add focus to the larger area;
- diversity and choice to enhance opportunity and interaction;
- alternative transportation that stresses access vs. speed and encourages a pedestrian-friendly environment;

- housing diversity in type, density, and location; and
- national and preserved areas that link all sectors together in a seamless way.

The policies listed above can be found in the Land Use Element of this General Plan, along with a specific description of the existing land use conditions.

#### **4.2.6.2 Objectives**

*Objective A: A transportation system that supports the planned land use development patterns.*

The relationship between the transportation system and land use planning is an interactive one. As stated above, one of the policies of the land use element is to support alternative transportation use. The transportation system can support this goal by providing the infrastructure necessary to use alternative transportation modes, and by not oversupplying infrastructure oriented to the use of the automobile, particularly single-occupant vehicles.

#### **4.2.6.3 Policies and Programs**

*Objective A: A transportation system that supports the planned land use development patterns.*

**Land Use and Transportation Policy A.1:** Each jurisdiction with lands at former Fort Ord shall coordinate land use and transportation planning both internally and with adjacent jurisdictions consistent with the Reuse Plan circulation framework.

**Program A.1-1:** Each jurisdiction shall support development of a travel demand model covering lands at former Fort Ord to help evaluate the relationship between land use and transportation system.

**Program A-1.2:** Each jurisdiction with lands at former Fort Ord shall require new developments to conduct a traffic analysis to determine impacts on traffic conditions, require measures such as TDM programs and traffic impact fees to mitigate these impacts.

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

**Program A.2-1:** Each jurisdiction with lands at former Fort Ord shall develop transportation standards for implementation of the transportation system, including but not limited to, rights-of-way widths, roadway capacity needs, design speeds, safety requirements, etc. Pedestrian and bicycle access shall be considered for all incorporation in all roadway designs.



## **Figure 4.2-7, Transportation Right-of-Way Reservations**

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*

Reuse Plan Elements  
4

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### 4.3 Recreation and Open Space Element

#### 4.3.1 Recreation

##### 4.3.1.1 Summary of Existing Conditions

The following is a general description of the recreation resources at the former Fort Ord. Specific documents consulted in order to identify recreation standards for the recreation planning at the former Fort Ord include the General Plan of the City of Seaside and the General Plan of the City of Marina. The Monterey County Department of Recreation was contacted directly.

Existing recreational uses of open space at the former Fort Ord include two golf courses and a club house, baseball diamonds, and tennis courts. Training areas are also part of this designation and include a central track and field, a stadium, and a recreation complex containing indoor basketball courts. There are a number of playgrounds within the existing housing neighborhoods and collocated with the existing schools.

The largest and most important pieces of the FORA reuse planning strategy as it relates to open space and recreation are already in place, or in process. The Bureau of Land Management has taken possession of approximately half (over 8,000 acres) of the Fort Ord interior lands for which it will ultimately have management responsibility. Significant recreation events, particularly mountain bike rallies, are already being scheduled within these lands. A tentative identification of major access points has been made, although ongoing trails and access planning will need to be coordinated with FORA in the future. A preliminary Master Plan has been prepared for the Fort Ord Dunes State Park by the State Park Department, which identifies early thinking regarding the location of major access points, day and overnight use areas, trail system, and habitat management areas. CSUMB has received a conveyance of a part of the land area, which will ultimately be theirs, and preparation of a Campus Master Plan has begun. It is important that FORA be involved in the preparation of this Master Plan to insure incorporation of the major ideas regarding base-wide recreation connections and conservation of natural resources.

##### 4.3.1.2 Recreation Standards

Recreation standards for two types of community-oriented recreation facilities were considered in the reuse planning effort: Neighborhood Parks and Community Parks. Each is defined below. Ample quantities of regional parkland are provided in the Reuse Plan, due to the development of Fort Ord Dunes State Park and the BLM lands, so standards for regional park demand were not developed.

**Neighborhood Parks:** Neighborhood parks are generally expected to serve a population of between 500 and 1,500 residents. They may include miniparks (up to 1/2 acre in size) and larger parks for an entire neighborhood (up to 10 acres in size). They are typically located with easy walking and biking distance

*Goal: Establish a unified open space system which preserves and enhances the health of the natural environment while contributing to the revitalization of the former Fort Ord by providing a wide range of accessible recreational experiences for residents and visitors alike.*





of residents (approximately 1/4 to 1/3 mile radius) so that minimal parking facilities are required. They should be located where neighborhood sidewalks and/or trails exist so that they are easily accessible by non-motorized forms of transportation. Neighborhood parks should be easily accessible and visible from the surrounding area. Access for the physically challenged should be provided where feasible to comply with the Americans with Disabilities Act (ADA).

Neighborhood parks are intended to serve youth from pre-school age to high school age, as well as to provide space for more adult-related activities such as pick-up basketball games, dog walking, Frisbee throwing, nature watching, and other casual activities. They should include play structures for small children when located in proximity to residential neighborhoods and ball fields when sufficient land is available. Larger community recreation structures may be present in more densely populated neighborhoods.

In the village neighborhoods, such as Marina Village, University Village, or Town Center, downtown miniparks should be considered as the area develops. These miniparks should be highly visible and easily accessible. They should encourage shoppers to stay longer in the area and provide workers and visitors with a place to relax, converse, eat lunch, etc.

**Community Parks:** Community parks serve the entire community. They may range in size from 10 to 50 acres, although it is expected that community parks larger than 15 to 20 acres will have substantial acreage dedicated to open space/habitat protection. They may focus on one unique community-wide feature or be designed to host substantial numbers of people and contain many diverse activities. Community parks may include features such as a public meeting space (i.e. gazebo and band shell), camping and recreational vehicle facilities, passive green space, ball fields, restrooms, group shelter(s), volleyball, wading pool, and sports complexes (e.g., swimming pool, ball courts). They may also be an area of natural quality and used for more passive outdoor recreation such as walking, nature observation, photography, relaxing/reading, sunbathing, and picnicking. Community parks may also include the facilities that are typically provided in neighborhood parks.

Community parks should be designed to serve neighborhoods in a 1 to 3-mile radius. They typically include improvements for on-site parking since visitors may travel by automobile to utilize the parks facilities. Parking will typically include accommodation for horse and other trailers where the park functions as a trailhead. Access for the physically challenged should be provided where feasible to comply with ADA.

**Standards**

Projections were made of population-based recreation demand at the former Fort Ord within the 20-year development time frame, as well as for the projected full residential build-out of the former Fort Ord. These projection were made separately for each of the three affected jurisdictions. This demand is described



in both land-based and facility-based terms. Local community standards were applied in order to identify the amount of park land which needed to be set aside, based on projections of population by jurisdiction, as shown in Table 4.3-1.

**Table 4.3-1  
Projected Park Demand**

Jurisdiction	Projected Population (1)	Neighborhood Standards	Projected Park Demand Acre Requirement	Community Standards	Acre Requirements
<b>2015 Scenario</b>					
Marina (2)	8,279	no separate standard		5 acres/1000 pop.	41
Seaside (3)	11,844	2 acres/1,000 pop.	24	1 acre/1,000 pop.	12
Monterey County (4)	1,154	no standard	0	no standard	0
<b>Total</b>	<b>21,277</b>		<b>24</b>		<b>53</b>
<b>Build-out</b>					
Marina (2)	12,837	no separate standard		5 acres/1000 pop.	64
Seaside (3)	15,529	2 acres/1,000 pop.	31	1 acre/1,000 pop.	16
Monterey County (4)	9,425	subdivision standard = 3 acres/1,000 pop.	28	no standard	0
<b>Totals</b>	<b>37,791</b>		<b>59</b>		<b>80</b>

NOTES:

- (1) Projected by EDAW based on 11/2/95 FORA planning scenario. Household population planning multipliers are based on existing Census-derived data for Marina, Seaside, and Monterey County. POM Annex military population is not included in calculations.
- (2) Source: City of Marina General Plan, Quad Consultants, February, 1993
- (3) Source: City of Seaside General Plan Update, D'Amico Associates, November, 1993
- (4) Source: Monterey County, personal communication. Only sub-regional recreation standard is a subdivision requirement of .003 acres/person.

National standards were applied in order to identify demand for specialized recreation facilities, as local jurisdictions do not maintain their own facility standards. Table 4.3-2 illustrates how population projections and national population-based standards (National Recreation and Park Association, 1983 Standards) produced specific facility requirements. A suggested distribution of these facilities is proposed in Recreation Standards and Cost projections Technical Memo, EDAW, Inc. December 20, 1995.

Following calculation of demand projections, the planning process developed a model park program for the former Fort Ord to portray a possible distribution pattern of community-serving recreation lands. The particular park areas in the former Fort Ord located in the areas of greatest demand due to residential development within the 2015 time frame were identified, and the projected acreage demand was distributed over those parks. This park program is shown in Table 4.3-3. Facility demand as well was programmed throughout the identified parks for costing purposes, which is also detailed in Recreation Standards and Cost projections Technical Memo, EDAW, Inc. December 20, 1995.



**TABLE 4.3-2  
FACILITY DEMAND FOR SELECTED FACILITIES  
(based on National Standards)**

Facility	Marina		Seaside		Monterey County	
	2015	Build-out	2015	Build-out	2015	Build-out
Tennis Courts	2	2	2	3	0	2
Soccer Fields	1	1	1	2	0	1
Basketball Courts	2	3	2	3	0	2
Ballfield (unlit)	1	3	2	3	0	2
Ballfield (lit)	1	1	1	1	0	0
Swimming pool	0	0	0	1	0	0

\* Based on National Recreation and Park Association, 1983 Standards

This park programming does not represent a commitment by the jurisdictions to a particular physical design program, but is a planning scenario which lays the groundwork for preparation of a Capital Improvements Plan by forming the basis of costing projections. The various jurisdictions making up the former Fort Ord have complete flexibility to substitute alternatives programs to this one to meet future needs as they develop, so long as an effort is made to adhere to the identified community standards. There is a real need for flexibility in the Plan, as these needs will change depending on the directions the ultimate redevelopment takes. For example, if the opportunity golf site identified for Polygon 4 is developed, projected recreation demand will fall, as less population growth will be realized, due to the golf course replacing the projected housing development.

**4.3.1.3 Objectives**

*Objective A: Integrate Fort Ord’s open spaces into the larger regional open space system, making them accessible as a regional resource for the entire Monterey Peninsula.*

The abundance of diverse open space resources at the former Fort Ord are so great that they will become an attraction drawing users and visitors from throughout the region and the state. It is important that reuse planning provide a strategy to insure adequate access to these resources. The value of the Fort Ord open space will be enhanced by providing linkages to other significant regional resources, such as Jack’s Peak and El Toro Regional Parks. The perception that these resources are all part of a larger interconnected whole will contribute to the image of the Monterey Peninsula as being rich in recreational resources.

*Objective B: Protect scenic views, and preserve and enhance visual quality.*

An integral part of the reuse planning strategy for the economic redevelopment of the former Fort Ord is to provide a visually attractive environment which will be a draw for businesses and residents alike. Another goal of the reuse



TABLE 4.3-3  
FORT ORD - 2015 PARK PROGRAM FOR ALL JURISDICTIONS

Name	Type	Total Size (acres)	Area Developed by 2015	Total Developed Area
<b>MARINA</b>				
Park in Polygon 4	Community/	20	10	
	Neighborhood Park	10	10	
Park in Polygon 2B	Neighborhood Park			
Park in Polygon 2G	Community Park	39.5	5	
Park in Polygon 17A	Community Park	46	17	
TOTALS				42 Acres
<b>SEASIDE</b>				
Park in Polygon 18	Community Park	50	12	
Park in Polygon 15	Neighborhood Park	9	9	
Park in Polygon 20e	Neighborhood Park	5	5	
Park in Polygon 20h	Neighborhood Park	10	10	
Park in Polygon 24*	Community Park	25	2	
TOTALS				38 Acres
<b>MONTEREY COUNTY</b>				
Park in Polygon 19A	Neighborhood Park	10	10	
Park in Polygon 29e	Community Park	25	25	
TOTALS				35 Acres

planning effort is to integrate the former Fort Ord into the greater Monterey Peninsula, both functionally and visually. Due to its location straddling State Highway 1, the main access route to the Monterey Peninsula, the former Fort Ord provides a major gateway image to the Peninsula itself. This image should be attractive and in harmony with that of the overall image of the Peninsula itself.

*Objective C: Promote the goals of the Habitat Management Plan through the sensitive siting and integration of recreation areas which enhance the natural community.*

Although the Habitat Management Plan sets aside considerable amounts of land which functions solely as habitat, the success of the HMP rests at least partially on making sure that these habitat lands are part of a greater continuous network of habitat. Parklands and active recreation areas will form an extremely valuable part of this network. Recreation and habitat preservation can be complementary land use functions, particularly with careful planning. Community development at the former Fort Ord must incorporate an awareness of the HMP, and site recreation areas in such a way as to complement its values. For example, the preservation of oak woodlands as continuous corridors rather than isolated patches will require the preservation of these corridors within residential, commercial, and institutional land uses. One means to accomplish this is through the sensitive siting of parkland.

*Objective D: Establish a system of community and neighborhood parks which provide recreation opportunities reflective of local community standards.*

As the former Fort Ord is transformed into a place where people live, work, and play, there is a need to provide adequate recreation resources of the appropriate scales and functions to serves the needs of the entire population. The different jurisdictions which make up the community of the former Fort



Ord have each established their own park standards in accordance with the needs of their residents. The abundance of open space resources at the former Fort Ord allows each jurisdiction involved in reuse planning to provide for ample parks and recreation uses as development strategies are considered for the area.

*Objective E: Create opportunities for economic revitalization of the former Fort Ord through encouragement of commercial recreation opportunities in appropriate settings.*

The Monterey Peninsula is a major tourist destination, with visitor serving land uses serving as a major underpinning of the local economy. The availability of recreation is also an important feature in the attraction of new businesses and residents.

*Objective F: Create a unified system of hiker/ biker and equestrian trails which links all sectors of the former Fort Ord and encourages alternative means of transportation.*

The extensive system of reserved open space, including local, state, and federally owned recreation lands, habitat management lands, and institutional settings provides a unique opportunity to create a network of trails which can serve as an alternative means of transportation and as recreation, serving the needs of residents, workers, and visitors alike. The potential of the former Fort Ord's major open space attractions as an ecotourism draw will be reinforced by such a system, and the provision of an attractive alternative transportation network will reduce the impact of development on the transportation system.

*Objective G: Use open space to create an attractive setting for the former Fort Ord's new neighborhoods and institutions.*

Open space serves functions other than recreation and habitat. It forms the setting for the FORA communities, neighborhoods, and business districts, and as such functions to establish the visual image and character of these communities. This is particularly true of the image as established through the windshield. Open space planning needs to incorporate strategies revolving around creating gateway images, strong streetscapes, and proper treatment of residual space.

*Objective H: Promote environmental education.*

The unique natural resources of the former Fort Ord provide an excellent outdoor laboratory for the large number of educational institutions establishing a presence here. The well-documented scientific baseline created as a result of the Base Closure process, the on-going needs of habitat management, and the ongoing natural systems restoration efforts on parts of the base all provide opportunities for hands-on environmental education which would be a valuable learning experience.



### **4.3.1.4 Recreation Policies and Programs**

#### ***City of Marina***

All physical features discussed in the City of Marina Policies and Programs section are shown in Figure 4.3-1, the Marina Recreation and Open Space Element Plan.

*Objective A: Integrate the former Fort Ord's open spaces into the larger regional open space system, making them accessible as a regional resource for the entire Monterey Peninsula.*

**Recreation Policy A-1:** The City of Marina shall work with the California State Park System to coordinate the development of Fort Ord Beach State Park.

**Recreation Policy A-2:** The City of Marina shall support the development of a regional Visitor Center/Historical Museum complex adjacent the 8th Street entrance to Fort Ord Beach State Park which will serve as a orientation center to communicate information about all of the former Fort Ord's recreation opportunities.

*Objective B: Protect scenic views, and preserve and enhance visual quality.*

**Recreation Policy B-1:** The City of Marina shall designate a Scenic Corridor adjacent to State Highway 1 to preserve and enhance the State Highway 1 viewshed.

Program B-1.1: The City of Marina shall establish guidelines for minimum landscaping standards within the corridor which incorporate a regional landscape theme with regards to permitted plantings, as well as other design features.

Program B-1.2: The City of Marina shall incorporate landscape buffers and/or other mechanisms adequate to mitigate the potential visual impacts on State Highway 1 Scenic Corridor from development within the Mixed Use Corporate Center and Del Monte Mixed Use Districts (polygons 2a and 2b).

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

*Objective C: Promote the goals of the Habitat Management Plan through the sensitive siting and integration of recreation areas which enhance the natural community.*

**Recreation Policy C-1:** The City of Marina shall establish an oak tree protection program to ensure conservation of existing coastal live oak wood lands in large corridors within a comprehensive open space system. Locate local and regional trails within this system.

*Objective D: Establish a system of community and neighborhood parks which provide recreation opportunities reflective of local community standards.*



**Recreation Policy D-1:** The City of Marina shall designate and locate park facilities to adequately serve the current and projected population of Marina within the former Fort Ord for both active recreation as well as to provide for passive uses such as scenic vistas, fish and wildlife habitat, and nature study.

**Recreation Policy D-2:** The City of Marina shall develop active parkland within the former Fort Ord which reflects the adopted City of Marina standard of 5 acres of neighborhood/community parks per 1,000 population.

**Recreation Policy D-3:** The City of Marina shall maximize use of existing former military recreation facilities as a catalyst for creation of quality parks and recreation opportunities.

**Recreation Policy D-4:** The City of Marina shall develop a plan for adequate and long-term maintenance for every public park prior to construction.

*Objective E: Create opportunities for economic revitalization of the former Fort Ord through encouragement of commercial recreation opportunities in appropriate settings.*

**Recreation Policy E-1:** The City of Marina shall identify golf course opportunity sites where appropriate as long-term or interim use solutions within the Marina portion of the former Fort Ord.

Program E-1.1: The City of Marina shall promote the development of a private golf course as an interim land use within the North Airport Light Industrial/Technology District

Program E-1.2: The City of Marina shall promote the development of a private golf course as an interim land use within the Planned Residential District in polygon 4.

**Recreation Policy E-2:** The City of Marina shall promote the development of a variety of interim use recreation facilities where appropriate within the former Fort Ord.

Program E-2.1: The City of Marina shall facilitate the development and operation of a commercial equestrian center as an interim land use within the Marina Village District.

*Objective F: Create a unified system of biker/ biker and equestrian trails which links all sectors of the former Fort Ord and encourages alternative means of transportation.*

**Recreation Policy F-1:** The City of Marina shall adopt roadway standards which allow for the development of hiker/biker trails within the right-of-way where appropriate.

**Recreation Policy F-2:** The City of Marina shall encourage the development of alternative means of transportation for recreation and other travel.

Program F-2.1: The City of Marina shall adopt a Comprehensive Trails Plan, and incorporate it into its General Plan. This Trail Plan will identify desired hiker/biker and equestrian trails within that portion of the former Fort Ord within Marina’s jurisdiction, create a trail hierarchy, and coordinate trail planning



## Figure 4.3-1, Marina Open Space and Recreation Element

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*





with other jurisdictions within Fort Ord boundaries in order to improve access to parks, recreational facilities and other open space.

*Objective G: Use open space wherever possible to create an attractive setting for the former Fort Ord's new neighborhoods and institutions.*

**Recreation Policy G-1:** The City of Marina shall use incentives to promote the development of an integrated, attractive park and open space system during the development of individual districts and neighborhood's within the former Fort Ord.

**Recreation Policy G-2:** The City of Marina shall encourage the creation of private parks and open space as a component of private development within the former Fort Ord.

**Recreation Policy G-3:** The City of Marina shall adopt landscape standards to guide development of streetscapes, parking lots, government facilities, institutional grounds, and other public and semi-public settings within the former Fort Ord.

**Recreation Policy G-4:** The City of Marina shall coordinate the development of park and recreation facilities with neighboring jurisdictions including the City of Seaside, Monterey County, CSUMB, California State Parks, and the Bureau of Land Management.

*Objective H: Promote environmental education*

**Recreation Policy H-1:** The City of Marina shall work with educational and environmental institutions and organizations to create opportunities for environmental learning experiences on Marina habitat management lands.

**City of Seaside**

All physical features discussed in the City of Seaside Policies and Programs section are shown in Figure 4.3-2, the Seaside Recreation and Open Space Element Plan.

*Objective A: Integrate the former Fort Ord's open spaces into the larger regional open space system, making them accessible as a regional resource for the entire Monterey Peninsula.*

**Recreation Policy A-1:** The City of Seaside shall work with the California State Park System to coordinate the development of Fort Ord Beach State Park.

*Objective B: Protect scenic views, and preserve and enhance visual quality.*

**Recreation Policy B-1:** The City of Seaside shall create a Scenic Corridor adjacent State Highway 1 to preserve and enhance the State Highway 1 viewshed.

Program B-1.1: The City of Seaside shall establish guidelines for minimum landscaping standards within the corridor which incorporate a regional landscape theme.



## Figure 4.3-2, Seaside Recreation and Open Space Element

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*



Program B-1.2: The City of Seaside shall require that all development within the Regional Retail and Golf Course Housing Districts incorporate land-scape buffers adequate to visual intrusion into the State Highway 1 Scenic Corridor.

**Recreation Policy B-2:** The City of Seaside shall establish landscape gateways into the former Fort Ord along major transportation corridors to establish a regional landscape character.

*Objective C: Promote the goals of the Habitat Management Plan through the sensitive siting and integration of recreation areas which enhance the natural community.*

**Recreation Policy C-1:** The City of Seaside shall establish an oak tree protection program to ensure conservation of existing coastal live oak wood lands in large corridors within a comprehensive open space system. Locate local and regional trails within this system.

*Objective D: Establish a system of community and neighborhood parks which provide recreation opportunities reflective of local community standards.*

**Recreation Policy D-1:** The City of Seaside shall designate and locate park facilities to adequately serve the current and projected population of Seaside within the former Fort Ord for both active recreation as well as to provide for passive uses such as scenic vistas, fish and wildlife habitat, and nature study.

**Recreation Policy D-2:** The City of Seaside shall develop active parkland within the former Fort Ord within the 2015 time frame which reflects the adopted City of Seaside standard of 2 acres of neighborhood parkland and 1 acre of community parkland per 1,000 population.

**Recreation Policy D-3:** The City of Seaside shall maximize use of existing former military recreation facilities as a catalyst for creation of quality parks and recreation opportunities.

**Recreation Policy D-4:** The City of Seaside shall develop a plan for adequate and long-term maintenance for every public park prior to construction.

*Objective E: Create opportunities for economic revitalization of the former Fort Ord through encouragement of commercial recreation opportunities in appropriate settings.*

**Recreation Policy E-1:** Seaside shall identify an appropriate amount of commercial recreation opportunity sites in compatible settings to ensure that these recreation opportunities are realized. These uses will be considered compatible land uses where identified.

Program E-1.1: The City of Seaside shall designate the existing golf course as a recreation opportunity site, and to be operated as a commercial venture.

*Objective F: Create a unified system of hiker/ biker and equestrian trails which links all sectors of the former Fort Ord and encourages alternative means of transportation.*

**Recreation Policy F-1:** The City of Seaside shall reserve sufficient space within key transportation arterials to accommodate paths for alternative means of transportation.



**Recreation Policy F-2:** The City of Seaside shall encourage the development of alternative means of transportation for recreation and other travel.

Program F-2.1: The City of Seaside shall adopt a Comprehensive Trails Plan, and incorporate it into its General Plan. This Trail Plan will identify desired hiker/biker and equestrian trails within that portion of the former Fort Ord within Marina’s jurisdiction, create a trail hierarchy, and coordinate trail planning with other jurisdictions within Fort Ord boundaries in order to improve access to parks, recreational facilities and other open space.

*Objective G: Use open space wherever possible to create an attractive setting for the former Fort Ord’s new neighborhoods and institutions.*

**Recreation Policy G-1:** The City of Seaside shall use incentives to promote the development of an integrated, attractive park and open space system during the development of individual districts and neighborhood’s within the former Fort Ord.

**Recreation Policy G-2:** The City of Seaside shall encourage the creation of private parks and open space as a component of private development within the former Fort Ord.

**Recreation Policy G-3:** The City of Seaside shall adopt landscape standards to guide development of streetscapes, parking lots, government facilities, institutional grounds, and other public and semi-public settings within the former Fort Ord.

**Recreation Policy G-4:** The City of Seaside shall coordinate the development of park and recreation facilities with neighboring jurisdictions including the City of Marina, Monterey County, CSUMB, California State Parks, and the Bureau of Land Management.

*Objective H: Promote environmental education*

**Recreation Policy H-1:** The City of Seaside shall work with educational and environmental institutions and organizations to create opportunities for environmental learning experiences on Seaside open space and recreation lands.

**Monterey County**

All physical features discussed in the Monterey County Policies and Programs section are shown in Figure 4.3-3, the Monterey County Recreation and Open Space Element Plan.

*Objective A: Integrate the former Fort Ord’s open spaces into the larger regional open space system, making them accessible as a regional resource for the entire Monterey Peninsula.*

**Recreation Policy A-1:** Monterey County shall provide for adequate access to BLM recreation area.

*Objective B: Protect scenic views, and preserve and enhance visual quality.*



**Recreation Policy B-1:** Monterey County shall work with the Army to review design of the landfill closure cap and related infiltration ponds to ensure development of a landscape which enhances the adjacent natural setting and becomes a visual asset to former Fort Ord.

*Objective C: Promote the goals of the Habitat Management Plan through the sensitive siting and integration of recreation areas which enhance the natural community.*

**Recreation Policy C-1:** Monterey County shall establish an oak tree protection program to ensure conservation of existing coastal live oak wood lands in large corridors within a comprehensive open space system. Locate local and regional trails within this system.

*Objective D: Establish a system of community and neighborhood parks which provide recreation opportunities reflective of local community standards.*

**Recreation Policy D-1:** Monterey County shall designate and locate park facilities to adequately serve the current and projected population of Monterey County within the former Fort Ord for both active recreation as well as to provide for passive uses such as scenic vistas, fish and wildlife habitat, and nature study.

**Recreation Policy D-2:** Monterey County shall develop active parkland within the former Fort Ord within the 2015 time frame which reflects the County subdivision standard of .003 acres of neighborhood parkland per person within development areas.

*Objective E: Create opportunities for economic revitalization of the former Fort Ord through encouragement of commercial recreation opportunities in appropriate settings.*

**Recreation Policy E-1:** Monterey County shall identify an appropriate amount of commercial recreation opportunity sites in compatible settings to ensure that these recreation opportunities are realized. These uses will be considered compatible land uses where identified.

**Recreation Policy E-2:** Monterey County shall work with landowners to create a multi-functional recreation area within the former military landfill area.

Program E-2.1: Monterey County shall create a joint management team with representatives of adjacent agencies to work together institutionally in the planning and development of the landfill, protect oak woodlands, and address potential impacts of planned uses on surrounding neighborhoods.

Program E-2.2: Monterey County shall promote the development of commercial recreation uses of this area compatible with the capping of the landfill, including such uses as a golf course, an equestrian center, and a region-serving amphitheater.

Program E-2.3: Monterey County shall designate a team of staff planners, landscape architects, engineers, and other qualified professionals to work with the Army through the BRAC process to ensure landfill cap design is adequate for proposed uses, including such parameters as depth of cap, final landforms, and visual attractiveness.



### **Figure 4.3-3, County Recreation and Open Space Element**

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*



**Recreation Policy E-3:** Monterey County shall coordinate with the City of Marina and the BLM to create an equestrian center/trail access point into the BLM lands within Marina’s Community Park on Intergarrison Road.

Program E-3.1: Monterey County shall designate an equestrian trail between the former landfill area equestrian center and the Marina Community Park along Intergarrison Road, including a safe crossing point of Intergarrison Road.

*Objective F: Create a unified system of hiker/biker and equestrian trails which links all sectors of the former Fort Ord and encourages alternative means of transportation.*

**Recreation Policy F-1:** Monterey County shall reserve sufficient space within key transportation arterials to accommodate paths for alternative means of transportation.

**Recreation Policy F-2:** The County of Monterey shall encourage the development of alternative means of transportation for recreation and other travel.

Program F-2.1: The County of Monterey shall adopt a Comprehensive Trails Plan, and incorporate it into its Greater Monterey Peninsula Area Plan. This Trail Plan will identify desired hiker/biker and equestrian trails within that portion of the former Fort Ord within Marina’s jurisdiction, creates a trail hierarchy, and coordinates trail planning with other jurisdictions within the former Fort Ord boundaries in order to improve access to parks, recreational facilities and other open space.

*Objective G: Use open space wherever possible to create an attractive setting for the former Fort Ord’s new neighborhoods and institutions.*

**Recreation Policy G-1:** Monterey County shall use incentives to promote the development of an integrated, attractive park and open space system during the development of individual districts and neighborhood’s within the former Fort Ord to encourage recreation and the conservation of natural resources.

**Recreation Policy G-2:** Monterey County shall encourage the creation of private parks and open space as a component of private development within Fort Ord.

**Recreation Policy G-3:** Monterey County shall adopt landscape standards to guide development of streetscapes, parking lots, government facilities, institutional grounds, and other public and semi-public settings within the former Fort Ord.

**Recreation Policy G-4:** Monterey County shall coordinate the development of park and recreation facilities with neighboring jurisdictions including the Cities of Seaside and Marina, CSUMB, Monterey Peninsula Regional Parks District, California State Parks, and the Bureau of Land Management.

*Objective H: Promote environmental education.*



## Fort Ord Reuse Plan

**Recreation Policy H-1:** The County of Monterey shall work with educational and environmental institutions and organizations to create opportunities for environmental learning experiences on County habitat management lands.

**Recreation Policy H-2:** The County of Monterey shall ensure that the designated operator of its Youth Camp develops a theme of environmental education as part of its curriculum.



Reuse Plan Elements  
4

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## 4.4 Conservation Element

The Conservation Element for Fort Ord conveys goals and policies on soils and geology, hydrology and water quality, biological resources, and air quality. The section identifies important natural resources at the former Fort Ord, recognizes their irreplaceable value and limited quantities, and provides specific strategies for their preservation.

The element, which is state mandated, requires that the natural resources within the boundaries of the former Fort Ord are supervised in perpetuity and that these resources are not diminished. The element's contents respond to California environmental laws, including the Clean Water Act and the Clean Air Act.

The Conservation Element overlaps provisions found in the land use, circulation, open space, and safety elements. It differs, however, from other portions of the reuse plan in its almost exclusive orientation toward natural resources. In addition, this element recognizes that natural resources, more so than any other issue discussed in the plan, are not constrained by jurisdictional boundaries. Vehicles traveling within and outside the former Fort Ord will impact air quality both within and outside the area. And animal species may move through the former Fort Ord on their way through the region, unaware of borders drawn on maps.

*Goal: Promote the protection, maintenance and use of natural resources, with special emphasis on scarce resources and those that require special control and management.*

### 4.4.1 Soils and Geology

#### 4.4.1.1 Summary of Existing Conditions

Following is a general description of soils, geology, and topography at the former Fort Ord. A more detailed description of these conditions is included in the Soils Baseline Study of Fort Ord, California (U.S. Army Corps of Engineers, Sacramento District 1992) and the setting section in Volume I of the Final Environmental Impact Statement (EIS) on Fort Ord Disposal and Reuse (U.S. Army Corps of Engineers, Sacramento District 1993.)

**Soils:** Most soils at the 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 was deposited in some areas, creating the older cemented sandstone layers and younger loose sandy soils common throughout the installation. More recently, very high dunes have developed along the coast as coastal beach and recent-age dune deposits.

The soils at the former Fort Ord are characteristically medium-grained sand of low to moderate organic matter content. The soils are highly erodible in areas of steeper slopes and cemented subsoil horizons, generally low in fertility and water-holding capacity, and excessively well drained. Although there are some minor inclusions of other soils, most of the soils at the former Fort Ord are represented in seven soil series (Oceano, Baywood, Santa Ynez, Arnold, Antioch, San Andreas, and Diablo) and three general classifications (Coastal beaches, Dune land, and Xerorthents). (See Figure 4.3-2 in Volume I of the final EIS for the distribution of these soil series at the former Fort Ord.)



**Erosion:** The severe coastal erosion at the former Fort Ord is a natural process that has been occurring for at least several thousand years. Some of the causes are the postglacial sea level rise and the wave patterns and geomorphic structure of Monterey Bay. The erosion rate has accelerated in this century from about 1.5 feet per year up to 7.0 feet per year in 1983. This increase is the result of reduced sediment supply from sand mining along the coast and sediment trapping in reservoirs in the Salinas River watershed, and loss of vegetation in shoreline dunes.

Wind erosion can affect Dune land, Oceano, and Baywood soils, and wind and water erosion can affect Arnold soil if vegetation is removed and the ground surface is disturbed. Organic matter accumulation or minimal development of soil structure in the surface horizons of the Oceano and Baywood soils may retard wind erosion and lower the erosion hazard if the topsoil has not been disturbed or removed. Sand blown from exposed soils damages existing and replanted vegetation and accumulates in areas from which it must be removed.

Five soils at the former Fort Ord are highly susceptible to water erosion: Santa Ynez, Arnold, San Andreas, Diablo, and Xerorthents soils. Although some erosion occurs naturally on these soils, water erosion is accelerated by disturbances such as road cuts. Erosion results in gullying, channel incisions, sedimentation in wetlands or stream channels downslope from erosion sites, and, in some areas, landslides.

**Soil Limitations:** Some soils on the former Fort Ord have limitations as substrates for engineering and construction purposes. These limitations are primarily related to piping, low-strength, and shrink-swell potential.

Soils with high piping potential are unconsolidated sands with very little organic or clay binders. Unconsolidated soils have large pore spaces between the soil particles. When water flows in these large pores, sand particles are washed away, which enlarges the pores further until they coalesce and form a continuous pipe-like passage. The flow rate accelerates, causing sand particles to break away and the pipe to enlarge. Concentrated flows of water or natural infiltration causes piping. Large amounts of soil material can be washed away below the soil surface without being detected until the surface collapses. Most of the soils at the former Fort Ord have high piping potential, and special consideration must be given to this soil hazard when developing these areas. (See Figure 4.3-11 in Volume I of the final EIS for areas with piping potential at the former Fort Ord.)

Soils with low strength lack adequate cohesion between the soil particles to support the weight of the soil. Sandy soils typically have low strength because of the lack of organic or clay materials to bind the grains together. When moisture is added to the soil, the weight may exceed the cohesive bonds. Low-strength soils typically fail on cut and fill banks that are excessively steep. Sandy soils, such as Baywood, Oceano, and Dune land, may be subject to low-strength conditions. In addition, soils with high shrink-swell potential contain clay minerals that expand when wet and shrink when the moisture content is reduced. These soils also have low-strength properties. High shrink-swell potential in



soils typically causes seasonal uplifting of roads and foundations that result in cracking. Clay soils, such as Diablo and Santa Ynez, have limitations caused by both low-strength and shrink-swell potential. (See Figures 4.3-9 and 4.3-10 in Volume I of the final EIS for the location of soils with low-strength and shrink-swell potential, respectively.)

**Topography:** Extensive areas in the southwestern quadrant of the former Fort Ord have slopes in excess of 30%. (See Figure 4.3-8 in Volume I of the final EIS for a slope map of the former Fort Ord.) Certain areas have slopes approaching vertical. Development has been limited in these areas because of the severe erosion and landslide hazard that exists.

#### **4.4.1.2 Objectives**

*Objective A: Prevent the loss and transport of soil resulting from wind and water erosion and promote construction practices that recognize soils with development limitations.*

The predominantly sandy and poorly aggregated soils of the former Fort Ord are highly susceptible to both wind and water erosion. When erosion occurs, sand and soil can be blown across highways, gulying can take place, and sedimentation of soil in streams and wetlands can increase, thereby degrading habitat values and increasing flood hazards. In defining the location and nature of development activities, planners should consider the affected soil resources including the erosion potential of the soil, the prevailing slope of the land, and the engineering limitations of the soil.

*Objective B: Provide for mineral extraction and reclamation activities that are consistent with the surrounding natural landscape, proposed future land uses, and soil conservation practices.*

The California Division of Mines and Geology is responsible for classifying areas of urbanization according to the presence or absence of significant gravel, sand, or stone deposits that are suitable sources of aggregate. The western approximate one-third of the former Fort Ord has been mapped and classified as Mineral Resource Zone - 2 (MRZ-2) for sand and gravel. This designation identifies areas where information indicates that significant mineral deposits are present or a high likelihood for their presence exists.

No active mining sites are known to exist within the former Fort Ord. Several borrow areas and quarries previously used by the Army appear to exist on the installation. Sand mining also occurs along the dunes to both the north and south of the former Fort Ord. If removal of sand or other materials is continued at selected areas within and adjacent to the former Fort Ord, these areas should be protected from incompatible land uses within the former Fort Ord. Measures should be taken to buffer the impact of mining activities on the surrounding natural environment and developed land uses, and to ensure that continued mining does not result in erosion and sedimentation problems.



*Objective C: Strive to conserve soils that rare species or plant communities are dependent on or are strongly associated with.*

Several plant and wildlife species addressed in the HMP are strongly associated with or dependent on specific soil types. For example, inland populations of sand gilia at the former Fort Ord are found almost exclusively on the Baywood and Arnold soil series, coast wallflower populations are limited to Baywood and Dune land soils, and the black legless lizard is most frequently found in Dune land, Baywood, or Oceano soils. The association between soils and rare species at the former Fort Ord limits the available habitat for these species and restricts the areas available for habitat restoration or enhancement.

#### **4.4.1.3 Policies and Programs**

##### ***City of Marina***

Objective A: Prevent soil transport and loss caused by wind and water erosion and promote construction practices that maintain the productivity of soil resources.

**Soils and Geology Policy A-1:** In the absence of more detailed site-specific information, the City shall use the Natural Resources Conservation Service's Soil Survey of Monterey County in determining the suitability of soil for particular land uses.

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

Program A-2.1: The City shall develop and make available a list and description of feasible and effective erosion control measures for various soil conditions within the City to be used by all future development at former Fort Ord.

Program A-2.2: The City shall develop and make available a list of recommended native plant and non-invasive non-native plant species, application rates, and planting procedures suitable for erosion control under various soil, slope, and climatic conditions that may be encountered in the City's sphere of influence.

Program A-2.3: The City shall develop and make available a list and description of feasible and effective engineering and design techniques that address the soil limitations characteristic of the former Fort Ord to be used by all future development at the former Fort Ord.

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



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

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

Program A-5.1: See Program A-2.3 above.

Program A-5.2: The City shall designate areas with severe soil limitations, such as those related to piping, low-strength, and shrink-swell potential, for open space or similar use if adequate measures cannot be taken to ensure the structural stability of these soils. This shall be designated at the project-specific level through a geotechnical study.

**Soils and Geology Policy A-6.** The City shall require that development of lands having a prevailing slope above 30% include implementation of adequate erosion control measures.

Program A-6.1: The City shall prepare and make available a slope map to identify locations in the study area where slope poses severe constraints for particular land uses.

Program A-2.1: See description of this program above.

Program A-2.2: See description of this program above.

Program A-2.3: See description of this program above.

Program A-6.2: The City shall designate areas with extreme slope limitations for open space or similar use if adequate erosion control measures and engineering and design techniques cannot be implemented.

*Objective B: Provide for mineral extraction and reclamation activities that are consistent with the surrounding natural landscape, proposed future land uses, and soil conservation practices.*

**Soils and Geology Policy B-1:** The City shall identify areas of highly valuable mineral resources within the former Fort Ord, based on the State of California Division of Mines and Geology’s mineral resource “classification-designation” system, and provide for the protection of these areas.

Program B-1.1: If the City determines that valuable mineral resources warranting protection are contained within the former Fort Ord, the City shall designate these areas in a mineral resource or similar land use category that would afford them protection; these areas shall also be zoned in a district consistent with this designation.

Program B-1.2: On property titles in the affected mineral resource protection areas, the City shall record a notice identifying the presence of valuable mineral resources.



**Soils and Geology Policy B-2:** The City shall protect designated mineral resource protection areas from incompatible land uses.

Program B-2.1: If so provided, the City shall specify in its mineral resource protection zoning district a requirement that provides sufficient buffers between mining activities and incompatible adjacent land uses.

Program B-2.2: If so provided, the City shall specify in its mineral resource protection zoning district those uses that are deemed compatible with mining activities.

**Soils and Geology Policy B-3:** Prior to granting permits for operation, the City shall require that mining and reclamation plans be prepared for all proposed mineral extraction operations.

Program B-3.1: The City shall develop and make available a list of issues to be considered and mitigated in mining and reclamation plans, including, but not limited to, the following: buffering, dust control, erosion control, protection of water quality, noise impacts, access, security, and reclamation.

**Soils and Geology Policy B-4:** The City shall require the posting of bonds for new mining permits if it determines that such a measure is needed to guarantee the timely and faithful performance of mining and reclamation plans.

*Objective C: Strive to conserve soils that rare species or plant communities are dependent on or strongly associated with.*

**Soils and Geology Policy C-1:** The City shall support and encourage existing state and federal soil conservation and restoration programs within its borders.

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

Program C-2.1: The City shall require that the land recipients of properties within the former Fort Ord implement the Fort Ord Habitat Management Plan.

**City of Seaside**

*Objective A: Prevent soil transport and loss caused by wind and water erosion and promote construction practices that maintain the productivity of soil resources.*

**Soils and Geology Policy A-1:** In the absence of more detailed site-specific information, the City shall use the Natural Resources Conservation Service’s Soil Survey of Monterey County in determining the suitability of soil for particular land uses.

**Soils and Geology Policy A-2:** The City shall require developers to prepare and implement erosion control and landscape plans for projects that involve high erosion risk. Each plan shall be prepared by a registered civil engineer or certified professional in the field of erosion and sediment control and shall be



subject to the approval of the public works director for the City of Seaside. The erosion component of the plan must at least meet the requirements of Storm Water Pollution Prevention Plans (SWPPPs) required by the California State Water Resources Control Board.

Program A-2.1: The City shall develop and make available a list and description of feasible and effective erosion control measures for various soil conditions within the City to be used by all future development at the former Fort Ord.

Program A-2.2: The City shall develop and make available a list of recommended native plant species, application rates, and planting procedures suitable for erosion control under various soil, slope, and climatic conditions that may be encountered in the City's sphere of influence.

Program A-2.3: The City shall develop and make available a list and description of feasible and effective engineering and design techniques that address the soil limitations characteristic of the former Fort Ord to be used by all future development at the former Fort Ord.

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

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

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

Program A-5.1: See Program A-2.3 above.

Program A-5.2: The City shall designate areas with severe soil limitations, such as those related to piping, low-strength, and shrink-swell potential, for open space or similar use if adequate measures cannot be taken to ensure the structural stability of these soils. This shall be designated at the project-specific level through a geotechnical study.

**Soils and Geology Policy A-6:** The City shall require that development of lands having a prevailing slope above 30% include implementation of adequate erosion control measures.

Program A-6.1: The City shall prepare and make available a slope map to identify locations in the study area where slope poses severe constraints for particular land uses.

Program A-2.1: See description of this program above.

Program A-2.2: See description of this program above.

Program A.2.3: See description of this program above.





Program A-6.2: The City shall designate areas with extreme slope limitations for open space or similar use if adequate erosion control measures and engineering and design techniques cannot be implemented.

*Objective B: Provide for mineral extraction and reclamation activities that are consistent with the surrounding natural landscape, proposed future land uses, and soil conservation practices.*

**Soils and Geology Policy B-1:** The City shall identify areas of highly valuable mineral resources within the former Fort Ord, based on the State of California Division of Mines and Geology’s mineral resource “classification-designation” system, and provide for the protection of these areas.

Program B-1.1: If the City determines that valuable mineral resources warranting protection are contained within the former Fort Ord, the City shall designate these areas in a mineral resource or similar land use category that would afford them protection; these areas shall also be zoned in a district consistent with this designation.

Program B-1.2: On property titles in the affected mineral resource protection areas, the City shall record a notice identifying the presence of valuable mineral resources.

**Soils and Geology Policy B-2:** The City shall protect designated mineral resource protection areas from incompatible land uses.

Program B-2.1: If so provided, the City shall specify in its mineral resource protection zoning district a requirement that provides sufficient buffers between mining activities and incompatible adjacent land uses.

Program B-2.2: If so provided, the City shall specify in its mineral resource protection zoning district those uses that are deemed compatible with mining activities.

**Soils and Geology Policy B-3:** Prior to granting permits for operation, the City shall require that mining and reclamation plans be prepared for all proposed mineral extraction operations.

Program B-3.1: The City shall develop and make available a list of issues to be considered and mitigated in mining and reclamation plans, including, but not limited to, the following: buffering, dust control, erosion control, protection of water quality, noise impacts, access, security, and reclamation.

**Soils and Geology Policy B-4:** The City shall require the posting of bonds for new mining permits if it determines that such a measure is needed to guarantee the timely and faithful performance of mining and reclamation plans.

*Objective C: Strive to conserve soils that rare species or plant communities are dependent on or strongly associated with.*

**Soils and Geology Policy C-1:** The City shall support and encourage existing state and federal soil conservation and restoration programs within its borders.



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

Program C-2.1: The City shall require that the land recipients of properties within the former Fort Ord implement the Fort Ord Habitat Management Plan.

### **Monterey County**

*Objective A: Prevent soil transport and loss caused by wind and water erosion and promote construction practices that maintain the productivity of soil resources.*

**Soils and Geology Policy A-1:** In the absence of more detailed site-specific information, the County shall use the Natural Resources Conservation Service's Soil Survey of Monterey County in determining the suitability of soil for particular land uses.

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

Program A-2.1: The County shall develop and make available a list and description of feasible and effective erosion control measures for various soil conditions within the County to be used by all future development at former Fort Ord.

Program A-2.2: The County shall develop and make available a list of recommended native plant and non-invasive non-native plant species, application rates, and planting procedures suitable for erosion control under various soil, slope, and climatic conditions that may be encountered in the County's sphere of influence.

Program A-2.3: The County shall develop and make available a list and description of feasible and effective engineering and design techniques that address the soil limitations characteristic of the former Fort Ord to be used by all future development at the former Fort Ord.

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

**Soils and Geology Policy A-4:** The County shall continue to enforce the Uniform Building Code to minimize erosion and slope instability problems.

**Soils and Geology Policy A-5:** Before issuing a grading permit, the County shall require that geotechnical reports be prepared for developments proposed



on soils that have limitations as substrates for construction or engineering purposes, including limitations concerning slope and soils that have piping, low-strength, and shrink-swell potential. The County shall require that engineering and design techniques be recommended and implemented to address these limitations.

Program A-5.1: See Program A-2.3 above.

Program A-5.2: The County shall designate areas with severe soil limitations, such as those related to piping, low-strength, and shrink-swell potential, for open space or similar use if adequate measures cannot be taken to ensure the structural stability of these soils. This shall be designated at the project-specific level through a geotechnical study.

**Soils and Geology Policy A-6:** The County shall require that development of lands having a prevailing slope above 30% include implementation of adequate erosion control measures.

Program A-6.1: The County shall prepare and make available a slope map to identify locations in the study area where slope poses severe constraints for particular land uses.

Program A-2.1: See description of this program above.

Program A-2.2: See description of this program above.

Program A.2.3: See description of this program above.

Program A-6.2: The County shall designate areas with extreme slope limitations for open space or similar use if adequate erosion control measures and engineering and design techniques cannot be implemented.

*Objective B: Provide for mineral extraction and reclamation activities that are consistent with the surrounding natural landscape, proposed future land uses, and soil conservation practices.*

**Soils and Geology Policy B-1:** The County shall identify areas of highly valuable mineral resources within the former Fort Ord, based on the State of California Division of Mines and Geology's mineral resource "classification-designation" system, and provide for the protection of these areas.

Program B-1.1: If the County determines that valuable mineral resources warranting protection are contained within the former Fort Ord, the County shall designate these areas in a mineral resource or similar land use category that would afford them protection; these areas shall also be zoned in a district consistent with this designation.

Program B-1.2: On property titles in the affected mineral resource protection areas, the County shall record a notice identifying the presence of valuable mineral resources.

**Soils and Geology Policy B-2:** The County shall protect designated mineral resource protection areas from incompatible land uses.



Program B-2.1: If so provided, the County shall specify in its mineral resource protection zoning district a requirement that provides sufficient buffers between mining activities and incompatible adjacent land uses.

Program B-2.2: If so provided, the County shall specify in its mineral resource protection zoning district those uses that are deemed compatible with mining activities.

**Soils and Geology Policy B-3:** Prior to granting permits for operation, the County shall require that mining and reclamation plans be prepared for all proposed mineral extraction operations.

Program B-3.1: The County shall develop and make available a list of issues to be considered and mitigated in mining and reclamation plans, including, but not limited to, the following: buffering, dust control, erosion control, protection of water quality, noise impacts, access, security, and reclamation.

**Soils and Geology Policy B-4:** The County shall require the posting of bonds for new mining permits if it determines that such a measure is needed to guarantee the timely and faithful performance of mining and reclamation plans.

*Objective C: Strive to conserve soils that rare species or plant communities are dependent on or strongly associated with.*

**Soils and Geology Policy C-1:** The County shall support and encourage existing state and federal soil conservation and restoration programs within its borders.

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

Program C-2.1: The County shall require that the land recipients of properties within the former Fort Ord implement the Fort Ord Habitat Management Plan.

## 4.4.2 Hydrology and Water Quality

### 4.4.2.1 Summary of Existing Conditions

Following is a brief discussion of the hydrology and surface water and groundwater quality at the former Fort Ord. A more detailed discussion of these systems can be found in the setting sections in Volume I of the Fort Ord Disposal and Reuse Final Environmental Impact Statement (U.S. Army Corps of Engineers, Sacramento District 1993) and the Fort Ord Disposal and Reuse Draft Supplemental Environmental Impact Statement (U.S. Army Corps of Engineers, Sacramento District 1995).

**Surface Water Hydrology:** The former Fort Ord, located between the Salinas and Carmel River watersheds, covers an area of approximately 44 square miles. The area has a moderate Mediterranean climate, receiving 90% of its 14.2 inches of annual precipitation from November through April. The topography of the 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.

**Groundwater Hydrology:** Three distinct geological and hydrological regions exist at the former Fort Ord (see Figure 4.5-1 in Volume I of the final EIS). The northwest part of the former Fort Ord overlies a small part of the Salinas Valley groundwater basin. The 180-foot aquifer is the shallowest of the aquifers in the former Fort Ord used for water supply. Beneath the 180-foot aquifer are two deeper aquifer zones referred to as the 400-foot and 900-foot aquifers. Historically, most pumpage from Fort Ord and the City of Marina came from the 180-foot aquifer, and by the early 1980s, seawater intrusion caused by pumping extended approximately 2.5 miles into the aquifer. Intrusion has stabilized since the 1980s as the result of decreases in the number of Army personnel, conservation, changes in well depths and locations, and drought-related decreases in total pumpage.

The southwest part of the former Fort Ord overlies the Seaside groundwater basin. The only pumpage from this basin by the former Fort Ord is for irrigation at the golf course. Most of the remaining pumpage is by municipal wells in Seaside and Sand City. With the exception of one shallow well near the shoreline, seawater has not intruded into wells in this basin.

The geological formations of the eastern part of the former Fort Ord, although less permeable than the sands of the western part, are capable of supporting water wells. The recharge that occurs in the eastern part of the former Fort Ord contributes groundwater inflow to the western part.

**Surface Water Quality:** 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. Urban stormwater runoff discharging into the ocean may also locally impair coastal water quality.

Monterey Bay is designated as a national marine sanctuary. Under this designation, resource protection is assigned a higher priority than research, education programs, and visitor use. The Marine Protection, Research, and Sanctuaries Act of 1972 requires a management plan to protect the sanctuary's resources.

**Groundwater Quality:** Groundwater quality within the former Fort Ord is variable, depending on the location and depth of the well. Seawater intrusion from groundwater pumping has caused the water to be unacceptable for drinking



in most wells in the 180-foot and 400-foot aquifers in the Main Garrison area. Recent water quality data for other active and standby potable supply wells in the East Garrison area and the golf course well in the Seaside basin have shown some concentrations of dissolved solids that exceed the recommended limit for drinking water. However, water from wells with high salinity can be blended with higher quality water to meet drinking water standards.

**Water Supply and Demand:** Wells provide the sole source of water supply for the former Fort Ord. The main potable supply wells are located in the Salinas Valley groundwater basin, and the golf course well is located in the Seaside basin.

Safe yield is the amount of groundwater that can be pumped annually on a long-term basis without causing undesirable effects. The worst of these potential effects in the Fort Ord area are excessive drawdown and seawater intrusion. The concept of safe yield is usually applied to an entire groundwater basin. However, overdraft can result in seawater intrusion locally, with other parts of the basin maintaining a positive groundwater balance. In the Salinas Valley groundwater basin, recent historical pumpage in the former Fort Ord exceeded safe yield, as indicated by seawater intrusion and water levels below sea level. The safe yield of the Seaside basin in the vicinity of Fort Ord approximately equals historical pumpage, and any increase in pumpage in the southern part of the former Fort Ord could cause total pumpage to exceed the Seaside basin's safe yield. The imbalance between supply and demand has caused local agencies to pursue water conservation measures and additional water supplies, including importation of water from inland parts of the Salinas Valley groundwater basin and a desalination plant.

**Fort Ord Reuse Authority Water Supply:** The Monterey County Water Resources Agency (MCWRA) has agreed that 6,600 acre-feet (AF) of water can be pumped each year at the former Fort Ord provided that such withdrawals do not aggravate or accelerate the existing seawater intrusion. It is expected that the Army will retain 1,500 AF of water for its own use, leaving 5,100 AF for other uses provided for by the Fort Ord Reuse Plan. It is unknown at this time whether the remaining 5,100 AF will be assigned in advance to specific uses or jurisdictions or distributed on a first-come, first-served basis.

#### **4.4.2.2 Objectives**

*Objective A: Protect and preserve watersheds and recharge areas, particularly those critical for the replenishment of aquifers.*

Because groundwater provides the sole source of water supply to the former Fort Ord, replenishment of the groundwater aquifer from precipitation and surface water sources is critical. The suitability of areas for groundwater recharge at the former Fort Ord is limited by a number of factors, including topography; soil type; the amount of impervious surfaces; and the Salinas Valley Aquiclude, an extensive clay layer that underlies a portion of the dune sand deposits. The value of the former Fort Ord's recharge and watershed areas for groundwater recharge should be considered when considering development plans for the former Fort Ord.



*Objective B: Eliminate long-term groundwater overdraft as soon as practicably possible.*

When the demand for groundwater exceeds the safe yield of an aquifer either locally or throughout a basin, groundwater overdraft occurs. Groundwater overdraft causes a series of related problems, including seawater intrusion. Wells that are encountered by the intruding seawater become contaminated and can no longer be used for domestic or agricultural uses. As noted earlier in the “Summary of Existing Conditions” section, seawater intrusion from groundwater pumping has occurred in the Salinas Valley groundwater basin. Those responsible for determining the allocation of water resources in the former Fort Ord and the location and nature of development activities need to consider the magnitude of available water resources, especially the safe yield of the aquifers.

*Objective C: Control nonpoint and point water pollution sources to protect the adopted beneficial uses of water.*

As discussed above in the “Summary of Existing Conditions” section, two important water quality issues for the former Fort Ord are related to Monterey Bay’s designation as a national marine sanctuary and the effect of seawater intrusion on groundwater quality and drinking water supplies. Surface water and groundwater quality impacts can be minimized through compliance with existing federal, state, and local programs aimed at controlling nonpoint and point source discharges affecting the quality of surface water and groundwater, and by controlling the type, location, and intensity of development that occurs at the former Fort Ord.

#### **4.4.2.3 Policies and Programs**

##### **City of Marina**

*Objective A: Protect and preserve watersheds and recharge areas, particularly those critical for the replenishment of aquifers.*

**Hydrology and Water Quality Policy A-1:** At the project approval stage, the City shall require new development to demonstrate that all measures will be taken to ensure that runoff is minimized and infiltration maximized in groundwater recharge areas.

Program A-1.1: The City shall develop and make available a description of feasible and effective best management practices and site drainage designs that shall be implemented in new development to ensure adequate stormwater infiltration.

*Objective B: Eliminate long-term groundwater overdrafting as soon as practicably possible.*

**Hydrology and Water Quality Policy B-1:** The City/County shall ensure additional water supply.



Program B-1.1: [This program was removed based on the listing of modifications to the Reuse Plan approved by the FORA Board on June 13, 1997.]

Program B-1.2: The City/County shall work with FORA and the MCWRA to determine the feasibility of developing additional water supply sources for the former Fort Ord, such as water importation and desalination, and actively participate in implementing the most viable option(s).

Program B-1.3: The City/County shall adopt and enforce a water conservation ordinance developed by the Marina Coast Water District.

Program B-1.4: The City/County shall continue to actively participate in and support the development of “reclaimed” water supply sources by the water purveyor and the MRWPCA to insure adequate water supplies for the former Fort Ord.

Program B-1.5: The City/County shall promote the use of on-site water collection, incorporating measures such as cisterns or other appropriate improvements to collect surface water for in-tract irrigation and other non-potable use.

Program B-1.6: The City/County shall work with FORA to assure the long-range water supply for the needs and plans for the reuse of the former Fort Ord.

Program B-1.7: The City/County, in order to promote FORA’s DRMP, shall provide FORA with an annual summary of the following: 1) the number of new residential units, based on building permits and approved residential projects, within its former Fort Ord boundaries and estimate, on the basis of the unit count, the current and projected population. The report shall distinguish units served by water from FORA’s allocation and water from other available sources; 2) estimate of existing and projected jobs within its Fort Ord boundaries based on development projects that are on-going, completed, and approved; and 3) approved projects to assist FORA’s monitoring of water supply, use, quality, and yield.

**Hydrology and Water Quality Policy B-2:** The City shall condition approval of development plans on verification of an assured long-term water supply for the projects.

*Objective C: Control nonpoint and point water pollution sources to protect the adopted beneficial uses of water.*

**Hydrology and Water Quality Policy C-1:** The City shall comply with all mandated water quality programs and establish local water quality programs as needed.

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





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

Program C-1.3: The City shall comply with the management plan to protect Monterey Bay's resources in compliance with the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, and its implementing regulations.

Program C-1.4: The City shall develop and implement a surface water and groundwater quality monitoring program that includes new domestic wells, to detect and solve potential water quality problems, including drinking water quality.

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

Program C-1.6: The City shall develop a program to identify wells that contribute to groundwater degradation. The City shall require that these wells be repaired or destroyed by the property owner according to state standards. These actions shall be reviewed and approved by the Monterey County Environmental Health Department (MCEHD).

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

Program C-2.1: The City/County shall develop and make available a description of feasible and effective measures and site drainage designs that will be implemented in new development to minimize water quality impacts.

**Hydrology and Water Quality Policy C-3:** The MCWRA and the City shall cooperate with MCWRA and MPWMD to mitigate further seawater intrusion based on Salinas Valley Basin Management Plan.

Program C-3.1: The City shall continue to work with the MCWRA and the MPWMD to estimate the current safe yield within the context of the Salinas Valley Basin Management Plan for those portions of the former Fort Ord overlying the Salinas Valley and the Seaside groundwater basins to determine available water supplies.

Program C-3.2: The City shall work with MCWRA and MPWMD to determine the extent of seawater intrusion into the Salinas Valley and Seaside groundwater basins in the context of the Salinas Valley Basin Management Plan, and shall participate in implementing measures to prevent further intrusion.

Program B.1-2: See description of this program above.

Program B.1-3: See description of this program above.



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

Program C-4.1: The City, in consultation with the Natural Resources Conservation Service, shall develop a program that will provide, to every landowner, occupant, and other appropriate entities information concerning vegetation preservation and other best management practices that would prevent siltation of waterways in or downstream of the former Fort Ord.

Program A-2.1: See description of this program in the Conservation Element.

Program A-2.2: See description of this program in the Conservation Element.

Program A-2.3: See description of this program in the Conservation Element.

**Hydrology and Water Quality Policy C-5:** The City shall support all actions necessary to ensure that sewage treatment facilities operate in compliance with waste discharge requirements adopted by the California Regional Water Quality Control Board.

**Hydrology and Water Quality Policy C-6:** In support of Monterey Bay’s national marine sanctuary designation, the City shall support all actions required to ensure that the bay and intertidal environment will not be adversely affected, even if such actions would exceed state and federal water quality requirements.

Program C-6.1: The City shall work closely with other Fort Ord jurisdictions and the CDPR to develop and implement a plan for stormwater disposal that will allow for the removal of the ocean outfall structures and end the direct discharge of stormwater into the marine environment. The program must be consistent with State Park goals to maintain the open space character of the dunes, restore natural landforms, and restore habitat values.

**Hydrology and Water Quality Policy C-7:** The City shall condition all development plans on verification of adequate wastewater treatment capacity.

**City of Seaside**

*Objective A: Protect and preserve watersheds and recharge areas, particularly those critical for the replenishment of aquifers.*

**Hydrology and Water Quality Policy A-1:** At the project approval stage, the City shall require new development to demonstrate that all measures will be taken to ensure that runoff is minimized and infiltration maximized in groundwater recharge areas.

Program A-1.1: The City shall develop and make available a description of feasible and effective best management practices and site drainage designs that shall be implemented in new development to ensure adequate stormwater infiltration.

Program A-1.2: A Master Drainage Plan should be developed for the Fort Ord property to assess the existing natural and man-made drainage facilities, recommend area-wide improvements based on the approved Reuse Plan and



develop plans for the control of storm water runoff from future development, including detention/retention and enhanced percolation to the ground water. This plan shall be developed by the FORA with funding for the plan to be obtained from future development. All Fort Ord property owners (federal, state, and local) shall participate in the funding of this plan. Reflecting the incremental nature of the funding source (i.e., development), the assessment of existing facilities shall be completed first and by the year 2001. This shall be followed by recommendations for improvements and an implementation plan to be completed by 2003.

*Objective B: Eliminate long-term groundwater overdrafting as soon as practicably possible.*

**Hydrology and Water Quality Policy B-1:** The City shall ensure additional water to critically deficient areas.

Program B-1.2: See description of this program under Marina above.

Program B-1.3: See description of this program under Marina above.

Program B-1.4: See description of this program under Marina above.

Program B-1.5: See description of this program under Marina above.

Program B-1.6: See description of this program under Marina above.

Program B-1.7: See description of this program under Marina above.

**Hydrology and Water Quality Policy B-2:** The City shall condition approval of development plans on verification of an assured long-term water supply for the projects.

*Objective C: Control nonpoint and point water pollution sources to protect the adopted beneficial uses of water.*

**Hydrology and Water Quality Policy C-1:** The City shall comply with all mandated water quality programs and establish local water quality programs as needed.

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

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

Program C-1.3: The City shall comply with the management plan to protect Monterey Bay's resources in compliance with the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, and its implementing regulations.

Program C-1.4: The City shall develop and implement a surface water and groundwater quality monitoring program that includes new domestic wells, to



detect and solve potential water quality problems, including drinking water quality.

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

Program C-1.6: The City shall develop a program to identify wells that contribute to groundwater degradation. The City shall require that these wells be repaired or destroyed by the property owner according to state standards. These actions shall be reviewed and approved by the Monterey County Environmental Health Department (MCEHD).

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

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

**Hydrology and Water Quality Policy C-3:** The MCWRA and the City shall cooperate with MCWRA and MPWMD to mitigate further seawater intrusion based on Salinas Valley Basin Management Plan.

Program C-3.1: The City shall continue to work with the MCWRA and the MPWMD to estimate the current safe yield within the context of the Salinas Valley Basin Management Plan for those portions of the former Fort Ord overlying the Salinas Valley and Seaside groundwater basins to determine available water supplies.

Program C-3.2: The City shall work with MCWRA and MPWMD to determine the extent of seawater intrusion into the Salinas Valley and Seaside groundwater basins in the context of the Salinas Valley Basin Management Plan, and shall participate in implementing measures to prevent further intrusion.

Program B-1.2: See description of this program above.

Program B-1.3: See description of this program above.

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

Program C-4.1: The City, in consultation with the Natural Resources Conservation Service, shall develop a program that will provide, to every landowner, occupant, and other appropriate entities and other appropriate entities, information concerning vegetation preservation and other best management practices that would prevent siltation of waterways in or downstream of the former Fort Ord.



Program A-2.1: See description of this program in the Conservation Element.

Program A-2.2: See description of this program in the Conservation Element.

Program A-2.3: See description of this program in the Conservation Element.

**Hydrology and Water Quality Policy C-5:** The City shall support all actions necessary to ensure that sewage treatment facilities operate in compliance with waste discharge requirements adopted by the California Regional Water Quality Control Board.

**Hydrology and Water Quality Policy C-6:** In support of Monterey Bay’s national marine sanctuary designation, the City shall support all actions required to ensure that the bay and intertidal environment will not be adversely affected, even if such actions would exceed state and federal water quality requirements.

Program C-6.1: See Program C-6.1 above.

**Hydrology and Water Quality Policy C-7:** The City shall condition all development plans on verification of adequate wastewater treatment capacity.

**Monterey County**

*Objective A: Protect and preserve watersheds and recharge areas, particularly those critical for the replenishment of aquifers.*

**Hydrology and Water Quality Policy A-1:** At the project approval stage, the County shall require new development to demonstrate that all measures will be taken to ensure that runoff is minimized and infiltration maximized in groundwater recharge areas.

Program A-1.1: The County shall develop and make available a description of feasible and effective best management practices and site drainage designs that shall be implemented in new development to ensure adequate stormwater infiltration.

**Hydrology and Water Quality Policy A-2:** To avoid adversely affecting groundwater recharge or surface water users in downstream areas, the County shall ensure that land use and drainage facilities on newly developed lands do not decrease or increase the magnitude and duration of flows less than or greater than the mean annual flow in creeks downstream of the development sites.

Program A-2.1: The County shall implement a stream gauging program for creeks in the eastern part of the former Fort Ord if proposals are submitted for development in that area. The gauging program shall be entirely funded by development fees.

*Objective B: Eliminate long-term groundwater overdrafting as soon as practicably possible.*

**Hydrology and Water Quality Policy B-1:** The County shall ensure additional water to critically deficient areas.



Program B-1.2: See description of this program under Marina above.

Program B-1.3: The County shall adopt and enforce a water conservation ordinance for its jurisdiction within Fort Ord, which is at least as stringent as Regulation 13 of the MPWMD.

**Hydrology and Water Quality Policy B-2:** The County shall condition approval of development plans on verification of an assured long-term water supply for the projects.

Program B-2.4: See description of this program under Marina above.

Program B-2.5: See description of this program under Marina above.

Program B-2.6: See description of this program under Marina above.

Program B-2.7: See description of this program under Marina above.

*Objective C: Control nonpoint and point water pollution sources to protect the adopted beneficial uses of water.*

**Hydrology and Water Quality Policy C-1:** The County shall comply with all mandated water quality programs and establish local water quality programs as needed.

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

Program C-1.2: The County shall comply with the General Industrial Storm Water Permit adopted by the SWRCB in November 1991 that requires all storm drain outfalls classified as industrial to apply for a permit for discharge.

Program C-1.3: The County shall comply with the management plan to protect Monterey Bay's resources in compliance with the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, and its implementing regulations.

Program C-1.4: The County shall develop and implement a surface water and groundwater quality monitoring program that includes new domestic wells, to detect and solve potential water quality problems, including drinking water quality.

Program C-1.5: The County shall adopt and enforce an hazardous substance control ordinance that requires that hazardous substance control plans be prepared and implemented for construction activities involving the handling, storing, transport, or disposal of hazardous waste materials.

Program C-1.6: The County shall develop a program to identify wells that contribute to groundwater degradation. The County shall require that these wells be repaired or destroyed by the property owner according to state standards. These actions shall be reviewed and approved by the Monterey County Environmental Health Department (MCEHD).



See Program C-6.1 above.

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

Program C-2.1: The County shall develop and make available a description of feasible and effective measures and site drainage designs that will be implemented in new development to minimize water quality impacts.

**Hydrology and Water Quality Policy C-3:** The MCWRA and the County shall cooperate with MCWRA and MPWMD to mitigate further seawater intrusion based on Salinas Valley Basin Management Plan.

Program C-3.1: The County shall continue to work with the MCWRA and the MPWMD to estimate the current safe yield within the context of the Salinas Valley Basin Management Plan for those portions of the former Fort Ord overlying the Salinas Valley and Seaside groundwater basins to determine available water supplies.

Program C-3.2: The County shall work with the MCWRA and MPWMD to determine the extent of seawater intrusion into the Salinas Valley and Seaside groundwater basin in the context of the Salinas Valley Basin Management Plan and shall participate in implementing measures to prevent further intrusion.

Program B-1.2: See description of this program above under Seaside.

Program B-1.3: See description of this program above under Seaside.

**Hydrology and Water Quality Policy C-4:** The County shall prevent siltation of waterways, to the extent feasible.

Program C-4.1: The County, in consultation with the Natural Resources Conservation Service, shall develop a program that will provide, to every landowner, occupant, and other appropriate entities, information concerning vegetation preservation and other best management practices that would prevent siltation of waterways in or downstream of the former Fort Ord.

Program A-2.1: See description of this program in the Conservation Element.

Program A-2.2: See description of this program in the Conservation Element.

Program A-2.3: See description of this program in the Conservation Element.

**Hydrology and Water Quality Policy C-5:** The County shall support all actions necessary to ensure that sewage treatment facilities operate in compliance with waste discharge requirements adopted by the California Regional Water Quality Control Board.

**Hydrology and Water Quality Policy C-6:** See Program C-6.1 above.

**Hydrology and Water Quality Policy C-7:** The County shall condition all development plans on verification of adequate wastewater treatment capacity.



### 4.4.3 Biological Resources

#### 4.4.3.1 Summary of Existing Conditions

The following is a general description of the biological resources at the former Fort Ord. A more detailed description of these resources is included in the EIR component of the Fort Ord Base Reuse Plan which incorporates by reference data collected and analyzed in the following documents: Flora and Fauna Baseline Study of Fort Ord, California (December 1992); Draft Fort Ord Disposal and Reuse Biological Assessment (February 1993); Supplement to the Draft Fort Ord Disposal and Reuse Biological Assessment (April 1993); Final Environmental Impact Statement, Fort Ord Disposal and Reuse (April 1993); Installation-Wide Multispecies Habitat Management Plan for Fort Ord, California (February 1994); University of California-Fort Ord Step Center Biotic Study, Phase I (July 1994).

The wide range of climatic, topographic, and soil conditions at the former Fort Ord contribute to the variety and uniqueness of the biological communities present. Fog protects much of the coastal areas from the effects of the summer dry season but the inland areas that are sheltered by hills are hot and dry. A large percentage of the ranges of relatively restricted habitat types such as central coast maritime chaparral and coastal coast live oak woodland occurs on the base. Coastal strand and dune, grasslands, riparian, vernal pond and other wetland communities are all well-represented at the former Fort Ord. The diverse habitat conditions support a broad array of wildlife species, many of which are adapted to specific habitat conditions found on the central coast.

Eight broad categories of biological communities have been identified at the former Fort Ord: beaches, bluffs & coastal strand; disturbed dune; coastal scrub; maritime chaparral; coast live oak woodland & savanna; native grassland; annual grassland and wetlands. The beaches, bluffs, coastal strand and disturbed dune communities occur adjacent to Monterey Bay and generally west of State Highway 1. Coastal scrub and maritime chaparral communities cover approximately 50% of the former Fort Ord and occur primarily in the inland areas. Coastal live oak woodland and savanna occur on about 5,000 acres distributed through the central portions of the base and grasslands and wetlands are scattered throughout, often occurring as islands within the other communities.

Several plant and animal species are found at the former Fort Ord that have been designated or proposed for listing as threatened, endangered, rare, or otherwise sensitive by various federal and state agencies and public interest organizations including, the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG) and the California Native Plant Society (CNPS). Botanical surveys during Spring 1992 identified populations of 22 special-status plant species at the former Fort Ord. Four of the species are listed as threatened or endangered under the federal or state endangered species acts: sand gilia, Monterey spineflower, robust spineflower, and Seaside bird's beak. There are also 22 special-status wildlife species known to occur or have potential to occur in terrestrial and freshwater environments at





the former Fort Ord. The names, legal status and habitat distribution for each of these special status plant and wildlife species are provided in Table 4.4-1 and Table 4.4-2. Table 4.4-3 shows known or potential occurrences of HMP and Non-HMP Resources within each jurisdiction.

#### **4.4.3.2 Objectives**

*Objective A: Preserve and protect the sensitive species and habitats addressed in the Installation-Wide Habitat Management Plan (HMP) for Fort Ord in conformance with its resource conservation and habitat management requirements and with the guidance provided in the HMP Implementing/Management Agreement*

The installation-wide multispecies habitat management plan for the former Fort Ord establishes the guidelines for the conservation and management of wildlife and plant species and habitats that largely depend on the former Fort Ord land for survival. The HMP was developed with input from federal, state, local and private agencies and organizations concerned with the natural resources and reuse of the former Fort Ord. Implementation of the HMP will assist in the orderly disposal and reuse of the former Fort Ord.

Identification of a list of “HMP species” was the first step in developing the guidelines for the HMP. Plant and wildlife species addressed in the HMP were selected based on their legal protection, current listing status, and the relative importance of populations and habitats at the former Fort Ord to the continued survival of the species. In addition, certain habitat types known to support large concentrations of HMP species, such as maritime chaparral, coastal strand and dune scrub, were included in the management guidelines. Table 4.2-1 provides a list of the species and habitats considered in the HMP. A conceptual conservation area and corridor system was developed to define the minimal area necessary to preserve HMP species populations and habitats according to known ecological principals and the known biological resource distributions at the former Fort Ord.

A general goal of the HMP is to promote preservation, enhancement and restoration of habitat and populations of HMP species while allowing implementation of a community-based reuse plan that promotes economic recovery of the former Fort Ord. As an installation-wide plan, all land areas to be disposed of by the Army are addressed in the HMP and are considered in achieving HMP goals. However, management guidelines and specifications for reuse vary from parcel to parcel based on future plans for the parcel associated with the HMP and overall reuse plan.

All recipients of former Fort Ord lands will be required to abide by the resource conservation and habitat management guidelines and procedures presented in the HMP and as outlined in the HMP Implementing/Management Agreement.

*Objective B: Preserve and protect sensitive species and habitats not addressed in the HMP.*



**Table 4.4-1  
Resources Considered in the HMP - "HMP Species"**

<b>Species Common and Scientific Name</b>	<b>Status<sup>1</sup> Federal/State/Other</b>	<b>Habitat</b>
<b>Plants</b>		
Sand gilia <i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	E/T/CNPS 1B	Sandy openings in coastal dunes and scrub and maritime chaparral
Monterey spineflower <i>Chorizanthe pungens</i> var. <i>pungens</i>	T/--/CNPS 1B	Recently disturbed sandy sites in coastal dune, coastal scrub, grassland, and maritime chaparral
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	PE/--/CNPS 1B	Sandy soils in coastal dune and coastal scrub habitats
Seaside bird's-beak <i>Cordylanthus rigidus</i> var. <i>littoralis</i>	C1/E/CNPS 1B	sandy soils of stabilized dunes, maritime chaparral, coastal scrub, and closed-cone coniferous forests
Toro manzanita <i>Arctostaphylos montereyensis</i>	C2/--/CNPS 1B	stabilized sandy soils and badlands in maritime chaparral
Sandmat manzanita <i>Arctostaphylos pumila</i>	C2/--/CNPS 1B	sandhills of maritime chaparral and coast live oak woodland
Monterey ceanothus <i>Ceanothus rigidus</i>	C2/--/CNPS 4	sandy hills and flats of maritime chaparral, closed-cone forest, and coastal scrub
Eastwood's ericameria <i>Ericameria fasciculata</i>	C2/--/CNPS 1B	Inhabits coastal dune and scrub, maritime chaparral, and closed-cone coniferous forest communities
Coast wallflower <i>Erysimum ammophilum</i>	C2/--/CNPS 1B	scattered on stabilized coastal dunes
Yadons piperia <i>Piperia yadoni</i>	C1/--/CNPS 1B	sandy soils in maritime chaparral, coastal scrub, and closed-cone coniferous forest
Hooker's manzanita <i>Arctostaphylos hookeri</i>	--/--/CNPS 1B	sandy soils, sandy shales, and sandstone outcrops
<b>Wildlife</b>		
Smith's blue butterfly <i>Euphilotes enoptes smithi</i>	E/--/--	Uses coastal dunes and hillsides that support seacliff buckwheat or coast buckwheat (nectar source for adults and host plant for larvae)
California red-legged frog <i>Rana aurora draytoni</i>	FPE/CSC/--	cold water ponds with emergent and submergent vegetation and riparian vegetation at the edges
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	T/CSC/--	along beaches above the high tide limit, shores of salt ponds and alkali or brackish inland lakes
California black legless lizard <i>Anniella pulchra nigra</i>	PE/CSC/--	moist, warm habitats with loose soil for burrowing and prostrate plant cover, may be found on beaches, in chaparral, pine oak woodland, or riparian areas

**Table 4.4-1 (Continued)  
Resources Considered in the HMP - "HMP Species"**

<b>Species Common and Scientific Name</b>	<b>Status<sup>1</sup> Federal/State/Other</b>	<b>Habitat</b>
California tiger salamander <i>Ambystoma tigrinum californiense</i>	C1/CSC	open woodlands and grasslands, required water for breeding and burrows or cracks in the soil for summer dormancy
Monterey ornate shrew <i>Sorex ornatus salarius</i>	C2/--/--	variety of riparian, woodland, and upland communities where there is thick duff or downed logs
<b>Habitats</b>		
Maritime chaparral	--/--/CEQA	
Native coastal strand	--/--/CEQA	
Dune scrub	--/--/CEQA	

**1. Status Explanations**

**Federal**

- E = listed as endangered under the federal Endangered Species Act
- T = listed as threatened under the federal Endangered Species Act
- PE = proposed for federal listing as endangered under the federal Endangered Species Act
- C1 = Category 1 candidate for federal listing. Category 1 includes species for which USFWS has on file enough substantial information on biological vulnerability and threats to support proposals to list them.
- C2 = Category 2 candidate for federal listing. Category 2 includes species for which USFWS has some biological information indicating that listing may be appropriate but for which further biological research and field study are usually needed to clarify the most appropriate status.
- = no designation

**State**

- E = listed as endangered under the California Endangered Species Act
- T = listed as threatened under the California Endangered Species Act
- CSC = California Department of Fish and Game species of special concern
- = no designation

**Other**

- CNPS 1B = California Native Plant Society list 1B: plants listed as rare, threatened or endangered in California and elsewhere
- CNPS 4 = California Native Plant Society list 4: plants of limited distribution in California - a watch list
- CEQA = resources with no formal listing that are considered sensitive by CDFG through the CEQA review process (see Appendix A for explanation)
- = no designation





Table 4.4-2: Resources Not Considered in the HMP - "Non-HMP Species"

Species Common and Scientific Name	Status <sup>1</sup> Federal/State/Other	Habitat
<b>Plants</b>		
Hickman's onion <i>Allium hickmanii</i>	C1/--/CNPS 1B	Grassy openings in closed-cone pine forests, maritime chaparral, and valley and foothill grasslands
Pajaro manzanita <i>Arctostaphylos pajaroensis</i>	--/--/CNPS 4	Sandy hills in chaparral
Monterey Indian paintbrush <i>Castilleja latifolia</i>	--/--/CNPS 4	Coastal dunes and scrub
Douglas' spineflower <i>Chorizanthe douglasii</i>	--/--/CNPS 4	Gravelly or sandy slopes
Lewis' clarkia <i>Clarkia lewisii</i>	--/--/CNPS 4	Coastal scrub, oak woodland, and chaparral communities
Virgate eriastrum <i>Eriastrum virgatum</i>	--/--/CNPS 4	Sand hills and mesas
Wedge-leaved horkelia <i>Horkelia cuneata</i> ssp <i>sericea</i>	C2/--/CNPS 1B	Sandy and gravelly places in coastal scrub, maritime chaparral, and closed-cone coniferous forest communities
Small-leaved lomatium <i>Lomatium parvifolium</i>	--/--/CNPS 4	Chaparral and open pine forests
Santa Cruz monkey flower <i>Mimulus rattanii</i> var. <i>decurtatus</i>	--/--/CNPS 4	Sandy, open places, especially around sandstone outcrops or on burns, and other disturbed areas in chaparral and conifer forests
Curly-leaved monardella) <i>Monardella undulata</i> var. <i>undulata</i>	--/--/CNPS 4	Chaparral and coastal dunes and scrub near the coast
Purple-flowered piperia <i>Piperia elongata</i> ssp. <i>michaelii</i>	--/--/CNPS 4	Coastal scrub and chaparral
<b>Animals</b>		
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	C2/CSC/--	Requires aquatic habitats such as ponds, marshes or streams, with rocky or muddy bottoms and vegetation for cover and food
Coast horned lizard <i>Phrynosoma coronatum</i>	C2/CSC/--	Occurs in areas with sandy soils and moderate cover
Cooper's hawk <i>Accipiter cooperi</i>	--/CSC/--	Nests in riparian forests and dense canopy oak woodlands; forages in open woodlands
Sharp-shinned hawk <i>Accipiter striatus</i>	--/CSC/--	Found in riparian forests, conifer forests and oak woodlands
Golden eagle <i>Aquila chrysaetos</i>	--/CSC/--	Nests in cliffs and large oaks; forages in annual grasslands, chaparral and oak woodlands with abundant medium-sized and large mammals for prey
Burrowing owl	C2/CSC/--	Nests in abandoned ground squirrel burrows in dry, flat grasslands, deserts and agricultural

**Table 4.4-2: Resources Not Considered in the HMP - "Non-HMP Species"**

Species Common and Scientific Name	Status <sup>1</sup> Federal/State/Other	Habitat
<i>Athene cunicularia</i>		areas
Northern harrier <i>Circus cyaneus</i>	--/CSC/--	Marshes and grasslands
Yellow warbler <i>Dendroica petechia</i>	--/CSC/--	Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders; may also use oaks, conifers and urban areas if they are near stream courses
Prairie falcon <i>Falco mexicanus</i>	--/CSC/--	Nests in cliffs and escarpments; forages in grasslands, pastures, savannas and desert scrub
Peregrine falcon <i>Falco peregrinus</i>	E/E/--	Nests and roosts on protected ledges on high cliffs, usually adjacent to water sources that support large bird populations
Tricolor blackbird <i>Agelaius tricolor</i>	C2/CSC/--	Nests in freshwater marshes with heavy growths of cattails and tules; other forms of dense vegetation may also be used for nesting; nesting areas must be large enough to support a colony of at least 50 pairs; birds forage in grasslands and fields surrounding the colony
Monterey dusky-footed woodrat <i>Neotoma fuscipes luciana</i>	C2/--/--	Uses habitats with moderate to dense cover and abundant dead wood for nest construction; maritime chaparral and coastal live oak woodland at Fort Ord
American badger <i>Taxidea taxus</i>	--/CSC/--	Open, grassy areas with scattered shrubs or trees for cover and loose soil for digging
Loggerhead shrike <i>Lanius ludovicianus</i>	C2/--/--	Open woodland habitats with scattered trees, shrubs, posts, fences, or other perches
California horned lark <i>Eremophila alpestris actia</i>	C2/--/--	Grasslands, rangelands, and other open habitats with low, sparse cover
Townsend's big-eared bat <i>Plecotus townsendii</i> ssp <i>townsendii</i>	C2/CSC/--	Inhabits oak bay woodlands and mixed broadleaf conifer woodlands. Requires access to caves, abandoned mines, building attics, or other dark cavities for daytime refuges.
Pallid bat <i>Antrozous pallidus</i>	C2/CSC/--	Found from annual grasslands through mixed-conifer forests. Most common in dry, open habitats with rocky areas available for day roosts.
California mastiff bat <i>Eumops perotis</i>	--/CSC/--	Lowland areas in arid to semi-arid habitats including deciduous woodlands, coastal scrub, and annual grasslands.

Habitats



**Table 4.4-2: Resources Not Considered in the HMP - "Non-HMP Species"**

Species Common and Scientific Name	Status <sup>1</sup>	Habitat
	Federal/State/Other	
Valley needlegrass grassland	--/--/CEQA	
Riparian forest	--/--/CEQA	
Oak woodlands	--/--/CEQA	
Streamzones	--/--/COE, CDFG	
Wetlands	--/--/COE, CEQA	

1. Status Explanations

- E = Listed as endangered under the California Endangered Species Act
- CSC = California Department of Fish and Game species of special concern
- = No designation

Other

- CNPS 1B = California Native Plant Society list 1B: plants listed as rare, threatened or endangered in California and elsewhere
- CNPS 4 = California Native Plant Society list 4: plants of limited distribution in California - a watch list
- CEQA = Resources with no formal listing that are considered sensitive by CDFG through the CEQA review process (see Appendix A for explanation)
- COE = Resources that may be subject to the jurisdiction of the U.S. Army Corps of Engineers (see Appendix A for explanation)
- CDFG = Resources that may be subject to the jurisdiction of the California Department of Fish and Game (see Appendix A for explanation)
- = No designation



Table 4.4-3

**Known or Potential Occurrences of HMP and Non-HMP  
Resources within each Jurisdiction<sup>1</sup>**

HMP	Resource	Marina	Seaside	Monterey County
	<i>HMP Plants</i>			
	Sand gilia	k	k	k
	Monterey spineflower	k	k	k
	Robust spineflower			k (west of SR 1)
	Seaside bird's beak		k	k
	Toro manzanita		k	k
	Sandmat manzanita	k	k	k
	Monterey ceanothus	k	k	k
	Eastwood's ericameria	k	k	k
	Coast wallflower	k	k	k
	Yadon's piperia	k		
	Hooker's manzanita			k
	<i>HMP Animals</i>			
	Smith's blue butterfly			k (west of SR 1)
	California red-legged frog	p		p
	Western snowy plover			k (west of SR 1)
	California black legless lizard	k	p	k
	California tiger salamander			k
	Monterey ornate shrew	p	p	p
	<i>Other HMP Resources</i>			
	Maritime chaparral	k	k	k
	Native coastal strand			k
	Dune scrub			k
<b>NON-HMP</b>	<i>Non-HMP Plants</i>			
	Hickman's onion			k
	Pajaro manzanita		k	
	Monterey Indian paintbrush			k (west of SR 1)
	Douglas' spineflower			k
	Lewis' clarkia	k		
	Virgate eriastrium	k	k	k
	Wedge-leaved horkelia	k	k	k
	Small-leaved lomatium	k	k	k
	Santa Cruz monkey flower	k		k
	Curly-leaved monardella	k	k	k
	Purple-flowered piperia	k	k	k
	<i>Non-HMP Animals</i>			
	Southwestern pond turtle	p		p
	Coast horned lizard	k	p	k
	Cooper's hawk			k
	Sharp-shinned hawk (wintering)	p		p
	Golden eagle	p	p	k
	Burrowing owl	p	p	p
	Northern harrier	p	p	p
	Yellow warbler			k
	Prairie falcon (foraging)	p	p	p
	Peregrine falcon			
	Tricolor blackbird			k
	Monterey dusky-footed woodrat	k	p	k
	Salinas harvest mouse	p	p	k
	Horned Lark	k	p	p
	Loggerhead shrike	k	k	k
	Greater road runner	p	p	p
	American badger	p	p	k
	<i>Other Non-HMP Resources</i>			
	Oak woodlands	k	k	k
	Streamzones	p	p	k
	Wetlands	p	p	k

<sup>1</sup> Based on biological studies completed for the U.S. Army Corps of Engineers, 1992 -94.



Both sensitive species and habitats exist at the former Fort Ord that were not addressed in the HMP. These species and habitats were not addressed either because they have no legal protection under the state and federal Endangered Species Acts, the USFWS was not currently preparing listing packages for these species to advance them to proposed, threatened or endangered status, or their existing populations and habitats at the former Fort Ord are not relatively important to the continued survival of the species. Nevertheless, these resources are important biologically and contribute greatly to the biological diversity on the former Fort Ord. These resources all also of concern to the California Department of Fish and Game and warrant consideration under California's planning and environmental laws, specifically CEQA. A list of these sensitive species and habitats is provided in Table 4.4-2.

The jurisdictions need to consider preservation, enhancement and restoration of habitat and populations of sensitive species not addressed in the HMP to maintain the former Fort Ord's biodiversity and to satisfy CDFG and CEQA requirements. This can be achieved in various ways: through avoidance or minimization of disturbance to the targeted habitats or species; preservation of additional set-aside areas, beyond those established in the HMP, which include the targeted habitats and/or species; and transplant or relocation of the targeted species to designated preserve areas.

*Objective C: Avoid or minimize disturbance to natural land features and habitats through sensitive planning, siting and design as new development is proposed in undeveloped lands.*

The reuse of the former Fort Ord will result in new development over as much as 4,000 acres of currently undeveloped land. With this new development, there is opportunity for the jurisdictions to maintain the uniqueness of the biological communities and the overall character of the natural lands by planning, siting and designing the development to complement the natural setting. Working with the natural topography as much as possible, and maintaining the native vegetation within the landscape will not only enhance the development but could add to the overall conservation of biological resources and maintenance of the region's biodiversity.

*Objective D: Promote public awareness and education concerning the biological resources on the former Fort Ord.*

The jurisdictions should promote both active and passive programs that increase public awareness of the value of these resources. Education of the public will be important in all stages of reuse and development of the former Fort Ord. To avoid unnecessary damage to biological resources as infrastructure and development projects proceed, contractors and others directly involved in reuse and redevelopment "on the ground" must understand and respect the biological resources of the area. Students at all levels will benefit from the environmental educational opportunities provided by the "outdoor classrooms" at the former Fort Ord. The recreational experience will be enhanced by interpretive displays along trails and in other designated areas. Finally, residents and other daily users of the base will gain understanding and respect for their natural surroundings through such programs.





*Objective E: Develop strategies for interim management of undeveloped natural land areas.*

As much as 4,000 acres of land within the developable footprint of the Fort Ord Reuse Plan exists as natural open space today and may remain so for twenty years or more before it is developed. Interim habitat management measures on these lands need to be addressed in order to protect designated habitat management and corridor areas from off-road vehicle use, any unauthorized disturbance, and invasion of exotic species.

All new Fort Ord land recipients with HMP obligations will need to submit to the USFWS and CDFG, through the Coordinated Resource Management Planning (CRMP) program, a plan for implementation of both short-term and long-term habitat management and protection measures for all natural lands as required by the HMP Implementing/Management Agreement. Similar programs for short-term management of undeveloped natural land areas will also need to be considered to protect not only HMP conservation areas and corridors, but to also protect additional set aside areas established through the Fort Ord Reuse Plan.

#### **4.4.3.3 Policies and Programs**

##### ***City of Marina***

*Objective A: Preserve and protect the sensitive species and habitats addressed in the Installation-wide Habitat Management Plan (HMP) for the former Fort Ord in conformance with its resource conservation and habitat management requirements and with the guidance provided in the HMP Implementing/Management Agreement.*

**Biological Resources Policy A-1:** The City shall manage, or cause to be managed, the Salinas River Habitat Area (Polygons 1e and 1d) to maintain existing habitat values for HMP species.

Program A-1.1: The City shall restrict development in parcels adjacent to the Salinas River Habitat Area to areas above the bluffs.

Program A-1.2: The City shall monitor, or cause to be monitored, the Salinas River Habitat Area in accordance with the HMP Implementing/Management Agreement and submit annual monitoring reports to CRMP.

Program A-1.3: The City may contract with an appropriate CRMP agency (or other such agency as approved by USFWS) to manage natural resources within the polygon.

**Biological Resources Policy A-2:** The City shall manage, or cause to be managed the remaining habitat within Marina Habitat Area #2 (Polygon 1b) to maintain existing habitat values for HMP species.

Program A-2.1: The City shall submit to the USFWS and CDFG, through the CRMP program, a plan for implementation of both short-term and long-term habitat management and protection measures for the Marina Habitat Area #2, including consideration of funding sources, legal mechanisms and a time table to provide for prompt implementation of HMP requirements along with the



following actions to prevent degradation of habitat:

- Control of off-road vehicle use.
- Prevention of any unauthorized disturbance to the habitat.
- Prevention of the spread of non-native, invasive species that may displace native habitat.

Program A-2.2: Development in this parcel shall be limited to FAA-required airport support facilities (navigational aids, access, and utilities), as well as a six-lane road through the area. Prior to proceeding with the design of allowable facilities, the City shall evaluate alternatives in coordination with a qualified biologist to ensure that the design and/or alignment is environmentally sensitive.

Program A-2.3: The City shall ensure that gates or vehicle barriers are constructed along access roads to prevent unauthorized off-road vehicle travel within the Habitat Area.

Program A-2.4: The City shall maintain, or cause to be maintained, small areas within the Habitat Area with disturbed sandy soils to support Monterey spineflower habitat.

Program A-2.5: The City shall monitor, or cause to be monitored this conservation area in accordance with the HMP Implementing/Management Agreement and submit annual monitoring reports to CRMP.

Program A-2.6: The City may contract with an appropriate CRMP agency (or other such agency as approved by USFWS) to manage natural resources within the polygon

**Biological Resources Policy A-3:** The City shall preserve in perpetuity the population of Yadon’s piperia in Polygon 2a.

Program A-3.1: The City shall require seasonally-timed surveys for Yadon’s piperia in Polygon 2a over time in order to establish suitable boundaries for the habitat preserve and proposed mixed-use areas. Consecutive annual surveys for a period of years will provided a comprehensive data base from which to plan land use.

Program A-3.2: Once the habitat preserve for Yadon’s piperia has been established, the City shall erect a barrier around the preserve sufficient to restrict vehicle access and require adjacent development to direct its runoff and storm drainage away from the preserve.

Program A-3.3: The City shall monitor, or cause to be monitored this preserve in accordance with the HMP Implementing/Management Agreement and submit annual monitoring reports to CRMP.

**Biological Resources Policy A-4:** The City shall ensure that all habitat conservation and corridor areas are protected from degradation due to development in, or use of adjacent polygons.

Program A-4.1: The City shall install or require the installation of a barrier sufficient to prevent vehicle access to all habitat conservation and corridor areas



within its jurisdiction. Barriers are to be erected on the parcels adjacent to the conservation and corridor areas and are to be maintained in perpetuity. The barrier erected to protect the habitat corridor in Polygon 5c shall also be sufficient to strongly discourage pedestrian access.

Program A-4.2: The City shall require stormwater drainage plans for all developments adjacent to habitat conservation and corridor areas to direct its runoff and storm drainage away from these areas to minimize potential for hydrologic modifications and erosion problems. The City shall require that all developments comply with the drainage plan as well as employ Best Management Practices during construction.

Program A-4.3: The City shall coordinate with the University of California Natural Reserve System when reviewing project applications for city lands that abut the habitat areas managed by the University of California to incorporate appropriate barriers and/or drainage controls into the project design.

Biological Resources Policy A-5: The City shall protect structures in parcels adjacent to the habitat corridor south of Reservation Road and west of Imjin Road (Polygon 5c) from wildfires that may originate in the corridor.

Program A-5.1: The City shall not permit any structures which directly abut the habitat corridor.

Program A-5.2: The City shall require a greenbelt, park, or other fire-resistant, non-residential land use at the boundary between development structures and the habitat corridor.

**Biological Resources Policy A-6:** The City shall design the Community Park within the residential development north of Imjin Road to incorporate natural habitat features.

Program A-6.1: The City shall encourage the use of native vegetation for landscaping, either as preserved during construction or planted as part of a landscaping plan after construction.

Program A-6.2: The City shall install permanent interpretive displays within the Community Park that describe the natural resources on the former Fort Ord and their importance to the Monterey Bay Area.

**Biological Resources Policy A-7:** Where possible, the City shall encourage the preservation of small pockets of habitat and populations of HMP species within and around developed areas.

Program A-7.1: The City shall require project applicants who propose development in undeveloped natural lands to conduct reconnaissance-level surveys to verify the general description of resources for the parcel provided in the biological resource documents prepared for the U.S. Army Corps of Engineers. The information gathered through these reconnaissance-level surveys shall be submitted as a component of the project application package.



Program A-7.2: The City shall encourage project applicants to incorporate small pockets of habitat containing HMP species and/or habitats amidst the development, where feasible.

Program A-7.3: Where development will replace existing habitat which supports sensitive biological resources, the City shall encourage attempts to salvage some of those resources by collecting seed or cuttings of plants, transplanting vegetation, or capturing and relocating sensitive wildlife species.

**Biological Resources Policy A-8:** The City shall protect the coastal zone west of State Highway 1 from habitat degradation due to increased public access.

Program A-8.1: The City shall abide by the habitat protection measures outlined in the State Parks Public Works Plan prepared by the State Department of Parks and Recreation for the Fort Ord Dunes State Park.

*Objective B: Preserve and protect sensitive species and habitats not addressed in the HMP.*

**Biological Resources Policy B-1:** The City shall strive to avoid or minimize loss of sensitive species listed in Table 4.4-2 that are known or expected to occur in areas planned for development.

Program B-1.1: Where the City has reason to suspect that they may occur on a proposed development site, the City shall require directed, seasonally-timed surveys for sensitive species listed in Table 4.4-2 as an early component of site-specific development planning.

Program B-1.2: If any sensitive species listed in Table 4.4-2 are found in areas proposed for development, all reasonable efforts should be made to avoid habitat occupied by these species while still meeting project goals and objectives. If permanent avoidance is infeasible, a seasonal avoidance and/or salvage/relocation program shall be prepared. The seasonal avoidance and/or salvage/relocation program for these species should be coordinated through the CRMP.

**Biological Resources Policy B-2:** Not applicable to Marina.

**Biological Resources Policy B-3:** The City shall preserve, enhance and protect, coastal ponds and other wetland areas.

Program B-3.1 [This program was removed based on the listing of modifications to the Reuse Plan adopted by the FORA Board on June 13, 1997.]

Program B-3.2: The City shall evaluate areas proposed for new development during the site planning process to determine whether wetlands occur. In the event that wetlands are present, the City shall require that they either be avoided or replaced so that there is no net loss to wetland resources as a result of development on the site. Wetlands replacement/mitigation plans should be coordinated through the CRMP.

Program B-3.3: The City should incorporate wetland features into stormwater control facilities to the extent practicable.



*Objective C: Avoid or minimize disturbance to natural land features and habitats through sensitive planning, siting and design as new development is proposed in undeveloped lands.*

**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.

Program C-1.1: The City shall encourage the use of landform grading techniques for 1) projects involving major changes to the existing topography, 2) large projects with several alternative lot and roadway design possibilities, 3) projects with known geological problem areas, or 4) projects with potential drainage problems requiring diverters, dissipaters, debris basins, etc.

**Biological Resources Policy C-2:** The City shall encourage the preservation and enhancement of oak woodland elements in the natural and built environments. Refer to Figure 4.4-1 for general location of oak woodlands in the former Fort Ord.

Program C-2.1: The City shall protect the small patches of oak woodland located along the bluffs in Polygon 1c unless project-specific plans for development in those areas cannot proceed without selective tree removal.

Program C-2.2: Where development incorporates oak woodland elements into the design, the City shall provide the following standards for plantings that may occur under oak trees; 1) plantings may occur within the dripline of mature trees, but only at a distance of five feet from the trunk and 2) plantings under and around oaks should be selected from the list of approved species compiled by the California Oak Foundation (see Compatible Plants Under and Around Oaks).

Program C-2.3: The City shall require that paving within the dripline of preserved oak trees be avoided wherever possible. To minimize paving impacts, the surfaces around tree trunks should be mulched, paving materials should be used that are permeable to water, aeration vents should be installed in impervious pavement, and root zone excavation should be avoided.

Program C-2.4: The City shall require the use of oaks and other native plant species for project landscaping. To that end, the City shall require collection and propagation of acorns and other plant material from former Fort Ord oak woodlands to be used for restoration areas or as landscape plants. However, this program does not exclude the use of non-native plant species.

**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.

Program C-3.1: The City shall review lighting and landscape plans for all developments adjacent to habitat conservation and corridor areas, or other open space that incorporates natural lands to ensure consistency with Policy C-3.



## Figure 4.4-1, Oak Woodland Areas

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*



*Objective D: Promote awareness and education concerning the biological resources on the former Fort Ord.*

**Biological Resources Policy D-1:** The City shall require project applicants to 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.

Program D-1.1: The City shall participate in the preparation of a contractor education program with other Fort Ord land use jurisdictions. The education program should describe the sensitivity of biological resources, provide guidelines for protection of special status biological resources during ground disturbing activities at the former Fort Ord, and outline penalties and enforcement actions for take of listed species under Section 9 of the Endangered Species Act and Section 2080 of the Fish and Game Code.

Program D-1.2: The City shall provide project applicants specific information on the protocol for recovery and relocation of particular species that may be encountered during construction activities.

**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.

Program D-2.1: The City shall develop interpretive signs for placement in habitat management areas. These signs shall describe resources present, how they are important to the former Fort Ord, and ways in which these resources are or can be protected.

Program D-2.2: The City shall coordinate production of educational materials through the CRMP process.

Program D-2.3: Where development will be adjacent to habitat management areas, corridors, oak woodlands, or other reserved open space, the City shall require project applicants to prepare a Homeowner’s Brochure which describes the importance of the adjacent land areas and provides recommendations for landscaping, and wildfire protection, as well as describes measures for protecting wildlife and vegetation in the adjacent habitat areas. (i.e. access controls, pet controls, use of natives in the landscape, etc.).

*Objective E: Develop strategies for interim management of undeveloped natural land areas.*

**Biological Resources Policy E-1:** The City shall develop a plan describing how it intends to address the interim management of natural land areas for which the City is designated as the responsible party.

Program E-1.1: The City shall submit to the USFWS and CDFG, through



CRMP, a plan for implementation of short-term habitat management for all natural lands, including consideration of funding sources, legal mechanisms and a time table to provide for prompt implementation of the following actions to prevent degradation of habitat:

- Control off-road vehicle use in all undeveloped natural land areas.
- Prevent any unauthorized disturbance in all undeveloped natural land areas, but especially in designated conservation areas and habitat corridors.
- Prevent the spread of non-native, invasive species that may displace native habitat.

Program E-1.2: For natural land areas under City responsibility with partial or no HMP resource conservation or management requirements, but which remain undeveloped, the City shall annually provide the BLM evidence of successful implementation of interim habitat protection measures as specified in Program E-1.1.

**Biological Resources Policy E-2:** The City shall monitor activities that affect all undeveloped natural lands, including, but not limited to conservation areas and habitat corridors as specified and assigned in the HMP.

Program E-2.1: The City shall conduct Land Use Status Monitoring in accordance with the methods prescribed in the Implementing Agreement for Fort Ord land under City responsibility that has any natural lands identified by the baseline studies. This monitoring will provide data on the amount (in acres) and location of natural land (by habitat type) remaining undeveloped and the amount (in acres) and location of natural land (by habitat type) disturbed by development since the date of land transfer for as long as the Implementing Agreement is in effect.

**City of Seaside**

*Objective A: Preserve and protect the sensitive species and habitats addressed in the Installation-wide Habitat Management Plan (HMP) for Fort Ord in conformance with its resource conservation and habitat management requirements and with the guidance provided in the HMP Implementing/Management Agreement.*

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

Program A-1.1: The City shall coordinate with BLM in the design and installation of appropriate firebreaks to be required on all parcels that border habitat management areas. Potential firebreaks include greenbelts, fuel reduction zones, fire roads, paved roads, tilled firebreaks, and parking lots. All firebreaks shall be at the development/habitat boundary, not necessarily at the parcel boundary,





and shall be installed within the parcel, not on habitat management areas. Firebreaks on adjacent parcels shall be contiguous.

Program A-1.2: The City shall coordinate with BLM in the design and siting of barriers sufficient to prevent unauthorized vehicle access to the habitat management lands from adjacent parcels. Gates shall be installed at appropriate points in the barrier to allow for emergency access and BLM and other appropriate agencies shall be provided keys to the gates. The City shall maintain, repair and replace, or cause to be maintained, repaired or replaced, the barrier as necessary in perpetuity.

Program A-1.3: The City shall require stormwater drainage plans for all developments adjacent to the habitat management areas to incorporate measures for minimizing the potential for erosion in the habitat management areas due to stormwater runoff.

**Biological Resources Policy A-2:** The City shall ensure that measures are taken to prevent degradation and siltation of the ephemeral drainage that passes through the Planned Residential Extension District and Community Park in Polygon 24.

Program A-2.1: The City shall require preparation of erosion control plans for proposed developments in vicinity of the ephemeral drainage that specifically address measures for protecting the drainage.

**Biological Resources Policy A-3:** The City shall protect the coastal zone west of State Highway 1 from habitat degradation due to increased public access.

Program A-3.1: The City shall abide by the habitat protection measures outlined in the State Parks Public Works Plan prepared by the State Department of Parks and Recreation for the Fort Ord Dunes State Park.

**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.

Program A-4.1: The City shall require project applicants who propose development in underdeveloped natural lands to conduct reconnaissance-level surveys to verify the general description of resources for the parcel provided in the biological resource documents prepared for the U.S. Army Corps of Engineers. The information gathered through these reconnaissance-level surveys shall be submitted as a component of the project application package.

Program A-4.2: The City shall encourage project applicants to incorporate small pockets of habitat containing HMP species and/or habitats amidst the development, where feasible.

Program A-4.3: Where development will replace existing habitat which supports sensitive biological resources, the City shall encourage attempts to salvage some of those resources by collecting seed or cuttings of plants, transplanting vegetation, or capturing and relocating sensitive wildlife species.



*Objective B: Preserve and protect sensitive species and habitats not addressed in the HMP.*

**Biological Resources Policy B-1:** The City shall strive to avoid or minimize loss of sensitive species listed in Table 4.4-2 that are known or expected to occur in areas planned for development.

Program B-1.1: Where the City has reason to suspect that they may occur on a proposed development site, the City shall require directed, seasonally-timed surveys for sensitive species listed in Table 4.4-2 as an early component of site-specific development planning.

Program B-1.2: If any sensitive species listed in Table 4.4-2 are found in areas proposed for development, all reasonable efforts should be made to avoid habitat occupied by these species while still meeting project goals and objectives. If permanent avoidance is infeasible, a seasonal avoidance and/or salvage/relocation program shall be prepared. The seasonal avoidance and/or salvage/relocation program for these species should be coordinated through the CRMP.

**Biological Resources Policy B-2:** As site-specific development plans for a portion of the Reconfigured POM Annex Community (Polygon 20c) and the Community Park in the University Planning Area (Polygon 18) are formulated, the City shall coordinate with Monterey County, California State University, FORA and other interested entities in the designation of an oak woodland conservation area connecting the open space lands of the habitat management areas on the south to the landfill polygon (8a) in the north.

Program B-2.1: For lands within the jurisdictional limits of the City that are components of the designated oak woodland conservation area, the City shall ensure that those areas are managed to maintain or enhance habitat values existing at the time of base closure so that suitable habitat is available for the range of sensitive species known or expected to use these oak woodland environments. Management measures shall include, but not be limited to maintenance of a large, contiguous block of oak woodland habitat, access control, erosion control and non-native species eradication. Specific management measures should be coordinated through the CRMP.

Program B-2.2: For lands within the jurisdictional limits of the City that are components of the designated oak woodland conservation area, the City shall monitor, or cause to be monitored, those areas in conformance with the habitat management compliance monitoring protocol specified in the HMP Implementing/Management Agreement and shall submit annual monitoring reports to the CRMP.

**Biological Resources Policy B-3:** The City shall preserve, enhance and protect wetland areas.

Program B-3.1: The City shall evaluate areas proposed for new development during the site planning process to determine whether wetlands occur. In the event that wetlands are present, the City shall require that they either be avoided or replaced so that there is no net loss to wetland resources as a result of development on the site. Wetlands replacement/mitigation plans should be coordinated through the CRMP.



Program B-3.2: The City should incorporate wetland features into stormwater control facilities to the extent practicable.

*Objective C: Avoid or minimize disturbance to natural land features and habitats through sensitive planning, siting and design as new development is proposed in undeveloped lands.*

**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.

Program C-1.1: The City shall encourage the use of landform grading techniques for 1) projects involving major changes to the existing topography, 2) large projects with several alternative lot and roadway design possibilities, 3) projects with known geological problem areas, or 4) projects with potential drainage problems requiring diverters, dissipaters, debris basins, etc.

**Biological Resources Policy C-2:** The City shall encourage the preservation and enhancement of oak woodland elements in the natural and built environments. Refer to Figure 4.4-1 for general location of oak woodlands in the former Fort Ord.

Program C-2.1: The City shall adopt an ordinance specifically addressing the preservation of oak trees. At a minimum, this ordinance shall include restrictions for the removal of oaks of a certain size, requirements for obtaining permits for removing oaks of the size defined, and specifications for relocation or replacement of oaks removed.

Program C-2.2: When reviewing project plans for developments within oak woodlands, the City shall cluster development wherever possible so that contiguous stands of oak trees can be maintained in the non-developed natural land areas.

Program C-2.3: The City shall require project applicants to submit a plot plan of the proposed development which: 1) clearly shows all existing trees (noting location, species, age, health, and diameter; 2) notes whether existing trees will be retained, removed or relocated, and 3) notes the size, species, and location of any proposed replacement trees.

Program C-2.4: The City shall require the use of oaks and other native plant species for project landscaping. To that end, the City shall recommend collection and propagation of acorns and other plant material from Fort Ord oak woodlands to be used for restoration areas or as landscape material.

Program C-2.5: The City shall provide the following standards for plantings that may occur under oak trees; 1) plantings may occur within the dripline of mature trees, but only at a distance of five feet from the trunk and 2) plantings under and around oaks should be selected from the list of approved species compiled by the California Oak Foundation (see Compatible Plants Under and Around Oaks).

Program C-2.6: The City shall require that paving within the dripline of preserved oak trees be avoided wherever possible. To minimize paving impacts,



the surfaces around tree trunks should be mulched, paving materials should be used that are permeable to water, aeration vents should be installed in impervious pavement, and root zone excavation should be avoided.

**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.

Program C-3.1: The City shall review lighting and landscape plans for all developments adjacent to undeveloped natural lands to ensure consistency with Policy C-3.

*Objective D: Promote awareness and education concerning the biological resources on the former Fort Ord.*

**Biological Resources Policy D-1:** The City shall require project applicants to 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.

Program D-1.1: The City shall participate in the preparation of a contractor education program with other Fort Ord land use jurisdictions. The education program should describe the sensitivity of biological resources, provide guidelines for protection of special status biological resources during ground disturbing activities at the former Fort Ord, and outline penalties and enforcement actions for take of listed species under Section 9 of the Endangered Species Act and Section 2080 of the Fish and Game Code.

Program D-1.2: The City shall provide project applicants specific information on the protocol for recovery and relocation of particular species that may be encountered during construction activities.

**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.

Program D-2.1: The City shall develop interpretive signs for placement in habitat management areas. These signs shall describe resources present, how they are important to the former Fort Ord, and ways in which these resources are or can be protected.

Program D-2.2: The City shall coordinate production of educational materials through the CRMP process.

Program D-2.3: Where development will be adjacent to habitat management areas, corridors, oak woodlands, or other reserved open space, the City shall



require project applicants to prepare a Homeowner’s Brochure which describes the importance of the adjacent land areas and provides recommendations for landscaping, and wildfire protection, as well as describes measures for protecting wildlife and vegetation in the adjacent habitat areas. (i.e. access controls, pet controls, use of natives in the landscape, etc.).

*Objective E: Develop strategies for interim management of undeveloped natural land areas.*

**Biological Resources Policy E-1:** The City shall develop a plan describing how it intends to address the interim management of natural land areas for which the City is designated as the responsible party.

Program E-1.1: The City shall submit to the USFWS and CDFG, through the Coordinated Resource Management Planning (CRMP) program, a plan for implementation of short-term management for all natural lands adjacent to the habitat management lands, including consideration of funding sources, legal mechanisms and a time table to provide for prompt implementation of the following actions to prevent degradation of habitat within the habitat management areas:

- Control off-road vehicle use in all undeveloped natural land areas adjacent to the habitat management lands.
- Prevent any unauthorized disturbance in all undeveloped natural land areas adjacent to the habitat management lands.
- Prevent the spread of non-native, invasive species that may displace native habitat.

Program E-1.2: For natural land areas under City responsibility with partial or no HMP resource conservation or management requirements, but which remain undeveloped, the City shall annually provide the BLM evidence of successful implementation of interim habitat protection measures as specified in Program E-1.1.

**Biological Resources Policy E-2:** The City shall monitor activities that affect all undeveloped natural lands.

Program E-2.1: The City shall conduct Land Use Status Monitoring in accordance with the methods prescribed in the Implementing Agreement for Fort Ord land under City responsibility that has any natural lands identified by the baseline studies. This monitoring will provide data on the amount (in acres) and location of natural land (by habitat type) remaining undeveloped and the amount (in acres) and location of natural land (by habitat type) disturbed by development since the date of land transfer for as long as the Implementing Agreement is in effect.



## County of Monterey

*Objective A: Preserve and protect the sensitive species and habitats addressed in the Installation-wide Habitat Management Plan (HMP) for Fort Ord in conformance with its resource conservation and habitat management requirements and with the guidance provided in the HMP Implementing/Management Agreement.*

**Biological Resources Policy A-1:** The County shall preserve all habitat in the County of Monterey Habitat Area (Polygon 11a) in perpetuity and manage, or cause to be managed, the area to maintain existing habitat values for HMP species.

Program A-1.1: The County shall submit to the USFWS and CDFG, through the CRMP program, a plan for implementation of both short-term and long-term habitat management and protection measures for this habitat corridor, including consideration of funding sources, legal mechanisms and a time table to provide for prompt implementation of HMP requirements along with the following actions to prevent degradation of habitat:

- Control of off-road vehicle use.
- Prevention of any unauthorized disturbance to the habitat.
- Prevention of the spread of non-native, invasive species that may displace native habitat.

Program A-1.2: Management of this habitat conservation area shall include:

- Maintenance of areas with disturbed sandy soils to support sand gilia and Monterey spineflower.
- Maintenance of north-south trending linear habitat, such as dirt roads or firebreaks and to retain and improve the area's function as a corridor for sand gilia dispersal.

Program A-1.3: The County shall monitor, or cause to be monitored, the Monterey County Habitat Area in accordance with the HMP Implementing/Management Agreement and submit annual monitoring reports to CRMP.

Program A-1.4: The County may contract with an appropriate CRMP agency (or other agency approved by the USFWS) to manage resources.

**Biological Resources Policy A-2:** The County shall limit development in the East Garrison area (Polygon 11b) to approximately 200 acres and retain the remainder of the parcel as natural habitat.

Program A-2.1: The County shall ensure the majority of the development in this parcel is contained within existing developed areas of East Garrison. Development that cannot be accommodated in existing developed areas shall be constructed in areas with less than 30% slope and sited to minimize impacts to HMP species.



Program A-2.2: Development within the East Garrison area shall be planned, sited, and designed to retain natural habitat areas that are contiguous within the parcel and with natural habitats in adjacent parcels.

Program A-2.3: The County shall prepare, or cause to be prepared, a management plan that addresses; special-status species monitoring, development and maintenance of fire breaks, controlled burning as appropriate, vehicle access controls, erosion control, and regular patrol to assure that passive public use and/or unauthorized actions are not adversely affecting natural habitats. The management plan shall be submitted to the USFWS and CDFG, through the CRMP program.

Program A-2.4: The County shall monitor, or cause to be monitored, the remaining natural areas within the parcel in accordance with the HMP Implementing/Management Agreement and submit annual monitoring reports to CRMP.

Program A-2.5: The County may contract with an appropriate CRMP agency (or other agency approved by the USFWS) to manage resources.

**Biological Resources Policy A-3:** The County shall maintain the habitat values and integrity of the habitat corridor through the western portion of the Recreational Vehicle Park/Youth Camp (Polygon 17b).

Program A-3.1 [This program has been removed based on the listing of modifications adopted by the FORA Board on June 13, 1997.]

Program A-3.2: The County shall restrict uses in the natural lands outside of campground facilities to low-impact programs for youth, outdoor nature education, resource management, and trails. The existing pond in the parcel shall continue to be used for recreational fishing.

Program A-3.3: The County shall prepare, or cause to be prepared, a management plan for the parcel that addresses special status species monitoring, controlled burning and firebreak construction/maintenance, vehicle access controls, erosion controls, and regular patrols to assure public use/unauthorized actions are not impacting the habitat. The County shall coordinate with the California Department of Forestry and CDFG to determine suitable habitat management practices for retaining and enhancing habitat values within the oak woodlands.

Program A-3.4: The County shall require the preparation and installation of interpretive signs/displays that describe the importance of the area as a wildlife corridor and methods for maintaining values such as trash removal, limiting ground disturbance, restraining pets, and discouraging capture or harassment of wildlife. The County shall also require that campers be notified not to collect any of the rare plants in the area. Interpretive signs/displays shall be installed at the RV park entrance and in selected locations throughout the park and camping areas.

Program A-3.5: The County shall require surveys for the Monterey ornate shrew throughout the natural lands in the RV parcel. If found, the following management practices shall be implemented: wood collection for campfires



shall not be permitted (wood shall be provided at the entrance to the campground); if trees or snags must be cut down for public safety reasons, the trunk shall be left on ground to provide potential habitat for the shrew.

Program A-3.6: The County shall require that landscaping within the campground consist of species native to the project site.

**Biological Resources Policy A-4:** The County shall protect the habitat corridor in the RV park/youth camp parcel from degradation due to development in, or use of adjacent parcels.

Program A-4.1: The County shall design the Community Park adjacent to the RV park/youth camp such that it does not impede the function of the habitat corridor in this area.

Program A-4.2: The County shall control unauthorized vehicle access into the habitat corridor area from adjacent parcels by erecting appropriate barriers along the boundaries between the parcels and the corridor.

Program A-4.3: The County shall direct all lighting in the Community Park and in the residential areas west of the RV parcel away from the natural lands in the habitat corridor.

Program A-4.4: Where possible, the County shall use vegetation native to the former Fort Ord in the landscaping for the Community Park.

Program A-4.5: The County shall include permanent interpretive displays in the Community Park design that describe the natural resources within the former Fort Ord and their importance to the Monterey Bay region.

Program A-4.6: The County shall require the following measures of development in the residential lands adjacent to the habitat corridor to protect structures from wildfires and minimize the potential for erosion in the corridor:

- No structures shall be constructed immediately along the boundary of the residential area and the habitat corridor.
- A non-flammable surface (parking lots, green belt) shall be constructed where development in the residential area abuts the natural lands.
- Stormwater runoff and other drainage from the residential area shall be directed away from the habitat corridor.

Program A-4.7: The County shall use native plants from on-site stock in all landscaping except for turf areas.

**Biological Resources Policy A-5:** The County shall ensure that the habitat management areas are protected from degradation due to development in, or use of adjacent parcels within its jurisdiction.

Program A-5.1: The County shall coordinate with BLM in the design and installation of appropriate firebreaks to be required on all parcels that border the habitat management lands. Potential firebreaks include greenbelts, fuel reduction zones, fire roads, paved roads, tilled firebreaks, and parking lots. All





firebreaks shall be at the development/habitat boundary, not necessarily at the parcel boundary, and shall be installed within the parcel, not on habitat management lands. Firebreaks on adjacent parcels shall be contiguous.

Program A-5.2: The County shall coordinate with BLM in the design and siting of barriers sufficient to prevent unauthorized vehicle access to the habitat management lands from adjacent parcels. Gates shall be installed at appropriate points in the barrier to allow for emergency access and BLM and other appropriate agencies shall be provided keys to the gates. The County shall maintain, repair and replace, or cause to be maintained, repaired or replaced, the barrier as necessary in perpetuity.

Program A-5.3: The County shall require stormwater drainage plans for all developments adjacent to the habitat management areas to incorporate measures for minimizing the potential for erosion in the Habitat Management due to stormwater runoff.

Program A-5.4: The County shall require that plans for construction of facilities in the northeastern portion of Polygon 19a include measures to protect the flow to and water quality of the ponds nearby, in the habitat management areas.

Program A-5.5: To minimize the potential for erosion or accelerated sedimentation, prevent fires from spreading, and prevent unauthorized access in the adjacent habitat management areas, the County shall require the following in the Laguna Seca Regional Park expansion areas on the former Fort Ord:

- Maintain grass over the majority of the areas where vegetation is removed to allow for parking. Mow the grass prior to using the area for parking.
- Require construction of a firebreak along the inside perimeter of each of the expansion areas. The firebreak shall be inspected before each event for which the areas are used and shall be improved as necessary to ensure its effectiveness.
- Require the removal of all trash immediately following each event in which the expansion areas are used.
- Post signs before each event in the expansion areas that state off-road vehicle use is not permitted in the habitat management areas.

Program A-5.6: The County shall monitor, or cause to be monitored, the two ponds within the habitat management area adjacent to the Laguna Seca Regional Park expansion areas to identify any impacts to these areas from the adjacent use. The ponds shall be inspected after each event for which the expansion areas are used. If adverse impacts are noted, the County shall require appropriate actions to prevent similar effects during future events.

**Biological Resources Policy A-6:** The County shall protect the coastal zone west of State Route 1 from habitat degradation due to increased public access.



Program A-6.1: The County shall abide by the habitat protection measures outlined in the State Parks Public Works Plan prepared by the State Department of Parks and Recreation for the Fort Ord Dunes State Park.

**Biological Resources Policy A-7:** The County shall coordinate with California State University and UCNRS to minimize the potential for HMP species in the habitat conservation and corridor areas adjacent the CSUMB land to be adversely affected by human activity associated with access.

Program A-7.1: The County shall consult with CSUMB during its Master Plan Process regarding potential pedestrian, bicycle and vehicle access to adjacent habitat conservation and corridor areas from the campus. Methods for controlling this access should be developed by CSUMB with assistance from the County and UCNRS.

**Biological Resources Policy A-8:** The County shall maintain the quality of the habitat in the Frog Pond Natural Area.

Program A-8.1: The direct discharge of storm water or other drainage from new impervious surfaces created by development of the office park parcel into the ephemeral drainage in the natural area expansion parcel will be prohibited. No increase in the rate of flow of storm water runoff beyond pre-development quantities shall be managed on-site through the use of basins, percolation wells, pits, infiltration galleries, or any other technical or engineering methods which are appropriate to accomplish these requirements. Indirect sub-surface discharge is acceptable. These stormwater management requirements will be used for development on Polygon 31b.

Program A-8.2: The County shall require installation of appropriate firebreaks and barriers sufficient to prevent unauthorized vehicle access along the border of Polygons 31a and 31b. A fuel break maintaining the existing tree canopy (i.e. shaded fuel break) shall be located within a five acre primary buffer zone on the western edge of Polygon 31b. No building or roadway will be allowed in this buffer zone with the exception of picnic areas, trailheads, interpretive signs, drainage facilities, and park district parking. Firebreaks should be designed to protect structures in Polygon 31b from potential wildfires in Polygon 31a. Barriers should be designed to prohibit unauthorized access into Polygon 31a.

**Biological Resources Policy A-9:** The County shall encourage the preservation of small pockets of habitat and populations of HMP species within and around developed areas.

Program A-9.1: The County shall require project applicants who propose development in undeveloped natural lands to conduct reconnaissance-level surveys to verify the general description of resources for the parcel provided in the biological resource documents prepared for the U.S. Army Corps of Engineers. The information gathered through these reconnaissance-level surveys shall be submitted as a component of the project application package.

Program A-9.2: The County shall encourage project applicants to incorporate small pockets of habitat containing HMP species and/or habitats amidst the development, where feasible.



Program A-9.3: Where development will replace existing habitat which supports sensitive biological resources, the County shall encourage attempts to salvage some of those resources by collecting seed or cuttings of plants, transplanting vegetation, or capturing and relocating sensitive wildlife species.

*Objective B: Preserve and protect sensitive species and habitats not addressed in the HMP.*

**Biological Resources Policy B-1:** The County shall strive to avoid or minimize loss of sensitive species listed in Table 4.4-2 that are known or expected to occur in areas planned for development.

Program B-1.1: The County shall require directed, seasonally-timed surveys for sensitive species listed in Table 4.4-2 as an early component of site-specific development planning in previously undeveloped areas of the former Fort Ord.

Program B-1.2: If any sensitive species listed in Table 4.4-2 are found in areas proposed for development, all reasonable efforts should be made to avoid habitat occupied by these species while still meeting project goals and objectives. If permanent avoidance is infeasible, a seasonal avoidance and/or salvage/relocation program shall be prepared. The seasonal avoidance and/or salvage/relocation program for these species should be coordinated through the CRMP.

**Biological Resources Policy B-2:** As site-specific planning proceeds for Polygons 8a, 16, 17a, 19a, 21a and 21b, the County shall coordinate with the Cities of Seaside and Marina, California State University, FORA and other interested entities in the designation of an oak woodland conservation area connecting the open space lands of the habitat management areas on the south, the oak woodland corridor in Polygons 17b and 11a on the east and the oak woodlands surrounding the former Fort Ord landfill in Polygon 8a on the north. Oak woodlands areas are depicted in Figure 4.4-1.

Program B-2.1: For lands within the jurisdictional limits of the County that are components of the designated oak woodland conservation area, the County shall ensure that those areas are managed to maintain or enhance habitat values existing at the time of base closure so that suitable habitat is available for the range of sensitive species known or expected to use those oak woodland environments. Management measures shall include, but not be limited to maintenance of a large, contiguous block of oak woodland habitat, access control, erosion control and non-native species eradication. Specific management measures should be coordinated through the CRMP.

Program B-2.2: For lands within the jurisdictional limits of the County that are components of the designated oak woodland conservation area, the County shall monitor, or cause to be monitored, those areas in conformance with the habitat management compliance monitoring protocol specified in the HMP Implementing/Management Agreement and shall submit annual monitoring reports to the CRMP.

**Biological Resources Policy B-3:** The County shall preserve, enhance, restore and protect vernal ponds, riparian corridors and other wetland areas.



Program B-3.1: The County shall require that, prior to any development activities within the watersheds of riparian drainages, vernal ponds or other important wetlands in the habitat management areas or other habitat conservation areas, a watershed management plan be prepared to assure that such activities do not adversely affect the flow to or water quality of those drainages, ponds or wetlands.

Program B-3.2: The County shall evaluate areas proposed for new development during the site planning process to determine whether wetlands occur. In the event that wetlands are present, the County shall require that they either be avoided or replaced so that there is no net loss to wetland resources as a result of development on the site. Wetlands replacement/mitigation plans should be coordinated through the CRMP.

Program B-3.3: The County should incorporate wetland features into stormwater control facilities to the extent practicable.

Program B-3.4: The County shall coordinate with the State Department of Transportation in the design of SR 68 to assess the feasibility of avoiding the riparian forest within the alignment. Where riparian forest removal is unavoidable, the County shall request CalTrans to compensate at a 2:1 ratio of newly created habitat to lost habitat or a 4:1 acreage ratio of enhanced habitat to lost habitat. Compensation and restoration could occur on other areas of Toro Creek.

*Objective C: Avoid or minimize disturbance to natural land features and habitats through sensitive planning, siting and design as new development is proposed in undeveloped lands.*

**Biological Resources Policy C-1:** The County of Monterey shall encourage that grading for projects be designed to complement surrounding topography, minimize habitat disturbance.

Program C-1.1: The County shall encourage the use of landform grading techniques for 1) projects involving major changes to the existing topography, 2) large projects with several alternative lot and roadway design possibilities, 3) projects with known geological problem areas, or 4) projects with potential drainage problems requiring diverters, dissipaters, debris basins, etc.

**Biological Resources Policy C-2:** The County shall encourage the preservation and enhancement of oak woodland elements in the natural and built environments. Refer to Figure 4.4-1 for general location of oak woodlands in the former Fort Ord.

Program C-2.1: The County shall cluster development wherever possible so that contiguous stands of oak trees can be maintained in the non-developed natural land areas.

Program C-2.2: The County shall apply certain restriction for the preservation of oak and other protected trees in accordance with Chapter 16.60 of Title 16 of the Monterey County Code (Ordinance 3420).



Program C-2.3: The County shall require the use of oaks and other native plant species for project landscaping. To that end, the County shall recommend collection and propagation of acorns and other plant material from the former Fort Ord oak woodlands to be used for restoration areas or as landscape material.

Program C-2.4: The County shall provide the following standards for plantings that may occur under oak trees; 1) plantings may occur within the dripline of mature trees, but only at a distance of five feet from the trunk and 2) plantings under and around oaks should be selected from the list of approved species compiled by the California Oak Foundation (see Compatible Plants Under and Around Oaks).

Program C-2.5: The County shall require that paving within the dripline of preserved oak trees be avoided wherever possible. To minimize paving impacts, the surfaces around tree trunks should be mulched, paving materials should be used that are permeable to water, aeration vents should be installed in impervious pavement, and root zone excavation should be avoided.

**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.

Program C-3.1: The County shall review lighting and landscape plans for all development applications to ensure consistency with Policy C-3.

*Objective D: Promote awareness and education concerning the biological resources on the former Fort Ord.*

**Biological Resources Policy D-1:** The County shall require project applicants to 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.

Program D-1.1: The County shall participate in the preparation of a contractor education program with other Fort Ord land use jurisdictions. The education program should describe the sensitivity of biological resources, provide guidelines for protection of special status biological resources during ground disturbing activities at the former Fort Ord, and outline penalties and enforcement actions for take of listed species under Section 9 of the Endangered Species Act.

Program D-1.2: The County shall provide project applicants specific information on the protocol for recovery and relocation of particular species that may be encountered during construction activities.

**Biological Resources Policy D-2:** The County 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.



Program D-2.1: The County shall develop interpretive signs for placement in habitat management areas. These signs shall describe resources present, how they are important to the former Fort Ord, and ways in which these resources are or can be protected.

Program D-2.2: The County shall coordinate production of educational materials through the Coordinated Resource Management Planning (CRMP) process.

Program D-2.3: Where development will be adjacent to habitat management areas, corridors, oak woodlands, or other reserved open space, the County shall require project applicants to prepare a Homeowner's Brochure which describes the importance of the adjacent land areas and provides recommendations for landscaping, and wildfire protection, as well as describes measures for protecting wildlife and vegetation in the adjacent habitat areas. (i.e. access controls, pet controls, use of natives in the landscape, etc.).

*Objective E: Develop strategies for interim management of undeveloped natural land areas.*

**Biological Resources Policy E-1:** The County shall develop a plan describing how it intends to address the interim management of natural land areas for which the County is designated as the responsible party.

Program E-1.1: The County shall submit to the USFWS and CDFG, through the CRMP program, a plan for implementation of short-term habitat management for all natural lands, including consideration of funding sources, legal mechanisms and a time table to provide for prompt implementation of the following actions to prevent degradation of habitat:

- Control off-road vehicle use in all undeveloped natural land areas.
- Prevent any unauthorized disturbance in all undeveloped natural land areas, but especially in designated conservation areas and habitat corridors.
- Prevent the spread of non-native, invasive species that may displace native habitat.

Program E-1.2: For natural land areas under County responsibility with partial or no HMP resource conservation or management requirements, but which remain undeveloped, the County shall annually provide the BLM evidence of successful implementation of interim habitat protection measures as specified in Program E-1.1.

**Biological Resources Policy E-2:** The County shall monitor activities that affect all undeveloped natural lands, including, but not limited to conservation areas and habitat corridors as specified and assigned in the HMP.

Program E-2.1: The County shall conduct Land Use Status Monitoring in accordance with the methods prescribed in the Implementing Agreement for



former Fort Ord land under County responsibility that has any natural lands identified by the baseline studies. This monitoring will provide data on the amount (in acres) and location of natural land (by habitat type) remaining undeveloped and the amount (in acres) and location of natural land (by habitat type) disturbed by development since the date of land transfer for as long as the Implementing Agreement is in effect.

#### 4.4.4 Air Quality

##### 4.4.4.1 Summary of Existing Conditions

###### ***Regional Air Quality Planning***

The cities of Marina and Seaside and the County of Monterey are in the North Central Coast Air Basin (the “Basin”). The North Central Coast Air Basin is also comprised of Monterey, Santa Cruz and San Benito Counties. The Basin is currently in attainment for the federal PM<sub>10</sub> (particulate matter less than 10 microns in diameter) standards and state and federal nitrogen dioxide, sulfur dioxide, and carbon monoxide standards. However, the Basin is classified as a nonattainment area for the state and federal ozone standards and the state PM<sub>10</sub> standards. The nonattainment designation means that the Basin does not meet ambient air quality standards.

The Monterey Bay Unified Air Pollution Control District (MBUAPCD) is delegated responsibility on the local level to implement both federal and state mandates for improving air quality in the Basin through an air quality plan. The 1994 Air Quality Management Plan contains the steps that will be taken to come into attainment with the state and federal standards. The MBUAPCD board has determined that, based on the existing information and analysis prepared by the MBUAPCD staff, the existing control strategies implemented by the MBUAPCD to reduce ozone will adequately control PM<sub>10</sub> emissions at this time. It is important to note that the current federal nonattainment designation for ozone is expected to be changed to a “Maintenance Area” by mid 1996.

Numerous exceedances of the local ozone standard in the Basin are attributable to the emissions generated from the San Francisco Bay Area Air Basin (MBUAPCD, 1994; Air Quality Management Plan, December 1994).

###### ***Regional Air Quality and Fort Ord***

Emissions from Fort Ord’s permitted sources (i.e., sources for which the Department of the Army held a permit to operate from the MBUAPCD) have been converted to “emission credits” during the base closure process through application of MBUAPCD Rule 215. This rule establishes procedures for the creation, banking (storage), and use of emission reduction credits and allows credits to apply to new uses. Future reuse of the former Fort Ord can then use these credits to offset emissions associated with future economic growth.



#### **4.4.4.2 Objectives**

*Objective A: Protect and improve air quality*

The Air Quality Management Plan includes Transportation Control Measures (TCM) and Indirect Source Review implementation measures. The TCMs attempt to reduce motor vehicle use through incentives to carpool, improved public transportation, parking management, and special motor vehicle fees.

The Transportation Agency for Monterey County (TAMC), through its Congestion Management Plan (CMP), is developing an integrated approach for transportation programming, focusing remedial efforts on congestion “hot spots”, managing traffic congestion, and improving air quality.

Through protection and improvement of air quality in the Basin, the economy of the region can continue to grow. It is important to note that air quality is integral to land use patterns and transportation choices.

Though the major efforts to reduce air pollution come from regional, state and federal programs, local jurisdictions and agencies can do much to reduce emissions. For example, the Monterey Peninsula Regional Park District has developed a bicycle path that connects Carmel with Castroville. Another strategy to reduce emissions includes zoning whereby housing is placed near jobs centers. Additionally, increasing residential land use densities and/or compact development allows mass transit to be operated more cost effectively.

#### **The Land Use - Air Quality Linkage**

This section is based on the 1994 California Environmental Protection Agency Air Resources Board report titled “The Land Use - Air Quality Linkage. How Land Use and Transportation Affect Air Quality.”

#### **Vehicle Use and Air Quality**

Today’s new cars pollute about ten times less than models produced 25 years ago due to California’s strict emissions standards. However, these reductions in emissions are also being offset by increased vehicle travel and population growth. During the past twenty years, the total number of “vehicle miles traveled” (VMT) in the State has increased twice as fast as the rate of population growth. Californians are driving more often, longer distances, and we also tend to be driving alone more often.

In California, the total annual vehicle miles of travel more than doubled between 1970 and 1990, increasing from 115 billion to over 250 billion miles of travel per year. During the same period of time, the State’s population grew by about 51%. The vehicle miles traveled within the Basin in 1992 resulted in 962 tons of oxides of nitrogen, 20 tons of oxides of sulfur, 11,381 tons of carbon monoxide, 138 tons of PM<sub>10</sub>, and 1,001 tons of reactive organic gases being emitted (MBUAPCD 1994).





## ***Land Use and Air Quality***

The Governor's Growth Management Council report states: "California cannot support a population growing past thirty million people based on existing housing and transportation patterns without unacceptable economic, social and environmental costs. Such housing and transportation patterns use too much land, are too spread out, require too much infrastructure, create too much traffic congestion, have adverse air impacts and other environmental costs, and simply cost too much. The State cannot afford it, as a financial matter. Most people could not afford it, either, if they bore the full costs of these housing and transportation patterns. What may have been possible with ten or even twenty million people is simply not sustainable for a population of twice that much in the same place.

The places that we drive in our daily routine, such as shopping centers, schools and universities, employment centers, and medical offices, are referred to as "indirect sources" by air quality specialists because they attract vehicle travel. The numerous vehicle trips to and from such destinations produce emissions that are monumental when compared to the pollutants emitted by typical stationary sources of air pollution, such as power plants, oil refineries and manufacturing facilities.

Vehicles traveling to and from a major regional shopping center located in a suburban area with limited transit service produce a significant amount of carbon monoxide. If that shopping center were located in an urban downtown area that is served by a good regional transit system and easily accessible by pedestrians, the amount of vehicle travel and related emissions could be much lower (JHK 1993).

### ***Optimum Land Use Strategies for Air Quality/Community Strategies***

Land uses that enable people to walk or to use transit, rather than needing to rely primarily on their cars for mobility, tend to be better for air quality. The following discussion briefly explores several such strategies.

To enhance transit use, the promotion of land uses that generate the most transit trips near stations, the location of these land uses in close proximity to transit station entrances, and accommodating high density land uses around stations, including suburban locations, are key land use programs for making best use of a transit system.

**Enhanced Central Business Districts:** Strong central business districts that include substantial amounts of both employment and housing have historically had the best quality transit service and the highest rates of transit use. Transit use tends to be higher at downtown sites for many reasons. There are a concentrated number of land uses located within walking distance of transit stations (such as jobs, shops, public facilities and retail services), higher parking costs, traffic congestion, limited parking availability, and there is better access to transit at both trip ends (JHK 1987).



**Compact Development:** Transit use generally increases in areas with higher overall residential and non-residential density. Concentrated land uses tend to reduce personal vehicle travel in several ways: activities located spatially closer together reduce travel distances; higher densities provide a larger number of potential transit riders and support a more efficient transportation system; and activities located closer together facilitate mode shifts from automobiles to walking, biking and transit. Higher levels of transit service become more feasible in areas with higher densities of residences, employees and services, especially if the land uses are clustered in proximity to transit stations and corridors.

**Residential Density:** Large areas of low density housing generally cannot justify or support effective levels of transit service. As noted by the Institute of Transportation Engineers (ITE 1989), the minimum density threshold for minimal local bus service to residential areas is between four and six dwellings per acre. At or above seven dwelling units per acre, bus service may be improved to one-half hour from one-hour headways, if this density is clustered and/or maintained over a large enough area to provide sufficient ridership.

Clusters of medium-density residential areas that average 7-15 dwelling units per acre can generally support frequent local bus service. If such densities are maintained over a large enough area, with good pedestrian accessibility, then light rail transit service may also become feasible. Heavy rail transit, such as the Bay Area Rapid Transit District (BART) and Cal Train in the San Francisco Bay Area, is generally appropriate for linking major concentrated urban areas.

**Employment Density:** The location, size and concentration of different employment activities are also significant factors in determining the type and level of transit service that can be efficiently provided and its eventual rate of use.

Employment sites scattered over a large area often attract enough vehicles to create significant traffic congestion, but usually do not generate enough transit rider to sustain convenient levels of transit service. In contrast, industrial facilities or offices with more closely-spaced buildings that are connected by direct pedestrian routes and served by convenient transit can result in increased use of alternative modes of travel.

**Clustered Activity Centers:** If a variety of activities, such as shops, services, offices and other employment sites as well as higher-density residential units are clustered together, they can become lively “activity centers”. A network of such centers, or “nodes”, can more easily be linked by a transit system to other similar centers and to the central business district. Centers that are served by transit can also provide access to transit service for surrounding residential areas.

Activity centers can combine higher-density development and can be located in both urban and suburban areas. It is important that such centers be located appropriately to take advantage of transit, and that adequate pedestrian facilities be provided. Otherwise, traffic levels can deteriorate even further. The clustered activity centers, by combining employment sites and residential units, necessarily incorporate a jobs-housing balance.



## ***Optimum Land Use Strategies for Air Quality/Neighborhood Strategies***

**Mixed-Use Developments:** Mixed-use development allows compatible land uses, such as shops, offices, and housing, to locate closer together and thus decreases travel distances between them. Mixed-use development, if properly designed and implemented can reduce vehicle miles traveled and trips and can help increase transit ridership, especially during the off-peak (non-commute) periods.

**Integrated Street Patterns:** During the past 20 years, the typical street circulation pattern in developing suburban areas has consisted of a hierarchy of local streets leading to collector streets, and then to major arterials that interconnect sections of a community to each other and to freeways.

Collector and arterial streets, which often provide the only connections between different sections of suburban communities, tend to be quite wide to allow vehicles to travel faster. The typical suburban circulation pattern decreases the number of available routes between trip origin and destination points, and places many vehicles on major streets and at signalized intersections during peak hours. This type of circulation pattern often results in much higher levels of traffic congestion, especially during peak periods. Wide streets with fast moving traffic are difficult and often dangerous for pedestrians and bicyclists to cross or to share with vehicles. Such thoroughfares become significant barriers to walking and bicycling, and thus tend to encourage the use of vehicles, even for very short trips.

In contrast to the typical suburban street hierarchy, an integrated street pattern provides multiple routes to destinations, reducing the distances between two points. Overall vehicle travel times for integrated street patterns are comparable to the faster-moving arterials due to the shorter distances between various origin and destination points. A study conducted by the American Society of Civil Engineers concluded that the gridded street patterns can reduce vehicle miles traveled by up to 57% within the neighborhood or subdivision, primarily due to more direct routing between locations. Actual travel times for vehicles were projected to be very similar to those found in typical hierarchical circulation patterns (Kulas, et. al. 1990).

### **4.4.4.3 Policies and Programs (applicable to all jurisdictions)**

*Objective A: Protect and improve air quality*

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

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

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



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

Program A-2.1: Each jurisdiction shall use the CEQA process to identify and avoid or mitigate potentially significant project specific and cumulative air quality impacts associated with development. As a Responsible Agency, the MBUAPCD implements rules and regulations for many direct and area sources of criteria pollutants and toxic air contaminants.

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

**Air Quality Policy A-3:** Integrate the land use strategies of the California Air Resources Board's The Land Use - Air Quality Linkage - How Land Use and Transportation Affect Air Quality, into local land use decisions.

Program A-3.1: Each jurisdiction shall plan and zone properties, as well as review development proposals to promote the Land Use-Air quality linkage. This linkage includes, but is not limited to, enhancement of Central Business Districts, compact development patterns, residential densities that average above seven dwelling units per acre, clustered employment densities and activity centers, mixed use development, and integrated street patterns.

Program A-3.2: Each jurisdiction shall zone high density residential and employment land uses to be clustered in and near activity centers to maximize the efficient use of mass transit.

#### **4.4.5 Cultural Resources**

##### **4.4.5.1 Summary of Existing Conditions**

This section describes archeological and historical resources at the former Fort Ord. It incorporates by reference the Fort Ord Disposal and Reuse Environmental Impact Statement, Volume I, US. Army Corps of Engineers, Sacramento District, 1993, and Supplemental Environmental Impact Statement, U.S. Army Corps of Engineers, Sacramento District, 1995.

##### ***Historical Background of Fort Ord***

Archeological evidence and radiocarbon dates establish human occupation of the California Coast dating back at least 10,000 years. Evidence from coastal areas of Monterey County suggests settlement of this area by at least 5,000 B.C., and possibly earlier. Proto-Esselen foragers speaking Hokan represented the Sur Pattern, dating to 5,000 B.C. They were replaced by proto-Coastanoan peoples in the Monterey Pattern, which began about 500 B.C. and lasted up to the Historic Period.

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. Their closest village center to the former Fort Ord was located at present day San Carlos. Rumsen/Ohlone traditional lifeways were largely destroyed when Euro-Americans began colonizing their territory in the 1770.

European contact began with the arrival of Spanish explorers in the 16th Century. In 1770, the Portola expedition established the first mission and the Royal Presidio in Monterey. In 1771, the Mission was moved to the Carmel Valley adjacent to arable land. By 1778, most of the remaining Rumsen and Esslen Indians in Carmel and Monterey were baptized and farming church lands, marking the beginning of the disintegration of Native American traditional lifeways in this area. By the turn of the century, vestigial Indian communities disappeared, and by 1935 the Ohlone language was extinct.

Fort Ord was created in 1917 from land designated as City of Monterey Tract No. 1 and several ranches. Originally named Gigling Reservation, the installation was renamed Camp Ord in 1933 after Major General Edward Ord, an important figure in California military history. Fort Ord became an active military installation for the housing and training of Army troops just before World War II. Many facilities were built beginning in 1940 using funds from the Work Progress Administration. Fort Ord was used as an important staging area during World War II and as a training facility during the Korean and Vietnam wars.

The areas of greatest archeological sensitivity at the former Fort Ord 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, and the coastal beaches. The areas of high archaeological resource sensitivity are generally illustrated in Figure 4.4-2. All other lands in the area have low to medium potential for possessing archeological resources.

### ***Historical Sites and Buildings***

The Army and the California State Historic Preservation Officer (SHPO) concluded from the results of five reports conducted for the U.S. Army's Environmental Impact Statement (EIS) that Stilwell Hall and 35 structures in the East Garrison area were the only Fort Ord properties eligible for the National Register of Historic Places (NRHP).

Stilwell Hall is located on the edge of Monterey Bay, west of State Highway 1 in an area formerly occupied by small arms training ranges. Built in 1940 as a soldiers' club, the structure was considered eligible for NRHP status because of its Works Progress Administration construction and interior art work, as well as its role as an interface between Fort Ord and the surrounding community. In recent years, the building's integrity has been threatened by coastal bluff erosion, and it is no longer used. In anticipation of further damage from erosion, the Army has completed a Historic American Building Survey inventory of the structure and its current condition (Office of Directorate of Environmental Programs, 1993).



## Figure 4.4-2, Archaeological Resource Sensitivity

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*



The East Garrison area includes a variety of concrete and wood frame structures, most built in 1940, in the Spanish mission revival style, as mess hall facilities for the 7th Infantry Division. Thirty-five of these structures, many converted to other uses, have been determined to comprise the East Garrison historic district.

More detailed descriptions of these architectural resources and their current condition are contained in Historical and Architectural Documentation Reports for Fort Ord (Office of Directorate of Environmental Programs, 1993).

Since issuance of the final EIS and Record of Decision, the Army has developed an agreement with the Advisory Council on Historic Preservation and the California SHPO to dispose of the historic Fort Ord property in accordance with the National Historic Preservation Act.

#### **4.4.5.2 Objectives**

*Objective A: Identify and protect all cultural resources at the former Fort Ord.*

Several archaeological surveys conducted for the Army's Environmental Impact Statement found cultural resources at the former Fort Ord (Lapp et al., 1993; Babson, 1993; Bowman et al., 1994; Waite 1994). Human occupation of the coastal area dates back approximately 10,000 years, with evidence suggesting settlement by Native American peoples in the area at least 5,000 years ago. The former Fort Ord is located within lands historically occupied by the Rumsen Indians who belonged to the Ohlone language family.

*Objective B: Preserve and protect historically significant resources at the former Fort Ord.*

The Army and the California historic authorities have concluded that several structures at the former Fort Ord, including Stilwell Hall and buildings in the East Garrison area, are eligible for the National Register of Historic Places.

#### **4.4.5.3 Policies and Programs**

##### **City of Marina**

*Objective A: Identify and protect all cultural resources at the former Fort Ord.*

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

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

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



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

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

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

Program A-2.2: If traditional cultural properties are found to exist on the City's lands at the former Fort Ord, the City of Marina shall ensure that deeds transferring Native American traditional properties include covenants that protect and allow Native Americans access to these properties. These covenants will be developed in consultation with interested Native American groups, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation. Leases will contain clauses that require compatible use and protection as a condition of the lease.

*Objective B: Preserve and protect historically significant resources at the former Fort Ord.*

**Cultural Resources Policy B-1:** The City of Marina shall provide for the identification, protection, preservation and restoration of the former Fort Ord's historically and architecturally significant resources.

Program B-1.1: The City of Marina shall seek funding that can be used to rehabilitate, restore and preserve existing historic resources at the former Fort Ord.

Program B-1.2: The City of Marina shall maintain historic buildings at the former Fort Ord in accordance with local and state historic preservation standards and guidelines, and condition their sale or transfer with protective covenants. These covenants will be developed in consultation with the SHPO, the Advisory Council on Historic Preservation, and interested parties.

Program B-1.3: The City of Marina shall regulate demolition of buildings of architectural or historical importance at the former Fort Ord and make sure that such demolition does not occur without notice and hearing. Wherever possible, the City shall encourage the moving of buildings proposed to be demolished when other means for their preservation cannot be found.

Program B-1.4: The City of Marina should attempt to establish a historic barracks district near the 8th Street overcrossing and the State Parks entrance. This small area could represent the historic character of the former Fort Ord, be utilized for museums and non-profit organizations and assist in establishing an activity center in the Town Center Planning Area.





**City of Seaside**

*Objective A: Identify and protect all cultural resources at the former Fort Ord.*

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

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

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

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

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

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

Program A-2.2: If traditional cultural properties are found to exist on the City's lands at the former Fort Ord, the City of Seaside shall ensure that deeds transferring Native American traditional properties include covenants that protect and allow Native Americans access to these properties. These covenants will be developed in consultation with interested Native American groups, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation. Leases will contain clauses that require compatible use and protection as a condition of the lease.

*Objective B: Preserve and protect historically significant resources at the former Fort Ord.*

**Cultural Resources Policy B-1:** The City of Seaside shall provide for the identification, protection, preservation and restoration of the former Fort Ord's historically and architecturally significant resources.

Program B-1.1: The City of Seaside shall seek funding that can be used to rehabilitate, restore and preserve existing historic resources at the former Fort Ord.

Program B-1.2: The City of Seaside shall maintain historic buildings at the former Fort Ord in accordance with local and state historic preservation standards and guidelines, and condition



their sale or transfer with protective covenants. These covenants will be developed in consultation with the SHPO, the Advisory Council on Historic Preservation, and interested parties.

Program B-1.3: The City of Seaside shall regulate demolition of buildings of architectural or historical importance at the former Fort Ord and make sure that such demolition does not occur without notice and hearing. Wherever possible, the City shall encourage the moving of buildings proposed to be demolished when other means for their preservation cannot be found.

### **County of Monterey**

*Objective A: Identify and protect all cultural resources at the former Fort Ord.*

**Cultural Resources Policy A-1:** The County of Monterey shall ensure the protection and preservation of archaeological resources at the former Fort Ord.

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

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

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

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

Program A-2-1: The County of Monterey shall coordinate with the California Native American Heritage Commission and California Native American points of contact for this region to identify traditional cultural properties located on former Fort Ord lands.

Program A-2-2: If traditional cultural properties are found to exist on the County's lands at the former Fort Ord, the County of Monterey shall ensure that deeds transferring Native American traditional properties include covenants that protect and allow Native Americans access to these properties. These covenants will be developed in consultation with interested Native American groups, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation. Leases will contain clauses that require compatible use and protection as a condition of the lease.



*Objective B: Preserve and protect historically significant resources at the former Fort Ord.*

**Cultural Resources Policy B-1:** The County of Monterey shall provide for the identification, protection, preservation and restoration of the former Fort Ord’s historically and architecturally significant resources.

Program B-1.1: The County of Monterey shall seek funding that can be used to rehabilitate, restore and preserve existing historic resources at the former Fort Ord.

Program B-1.2: The County of Monterey shall maintain historic buildings at the former Fort Ord in accordance with local and state historic preservation standards and guidelines, and condition their sale or transfer with protective covenants. These covenants will be developed in consultation with the SHPO, the Advisory Council on Historic Preservation, and interested parties.

Program B-1.3: The County of Monterey shall regulate demolition of buildings of architectural or historical importance at the former Fort Ord and make sure that such demolition does not occur without notice and hearing. Wherever possible, the City shall encourage the moving of buildings proposed to be demolished when other means for their preservation cannot be found.

**Cultural Resources Policy B-2:** The County of Monterey shall promote the preservation and enhancement of the East Garrison historic area.

Program B-2.1: The County of Monterey shall use land use and circulation policies that are effective in maintaining the character of the East Garrison historic area.

Program B-2.2: The County of Monterey shall ensure that development of the East Garrison historic area is consistent with maintaining its historic scale and character.

Program B-2.3: The County of Monterey, in association with Monterey Peninsula College and all other proponents of new uses of historic structures in the East Garrison area, shall cooperate with the California State Historic Preservation Officer to develop a management strategy that recognizes the historic value of the East Garrison historic district, in accordance with the 1994 agreement developed by the U.S. Army, the Advisory Council on Historic Preservation and the California SHPO. The county will be responsible for initiating any further consultation with the SHPO needed to modify these covenants or conditions.



## 4.5 Noise Element

### 4.5.1 Introduction

The purpose of the noise element is to provide guidelines that will allow planners to avoid or minimize conflicts that may occur as a result of incompatible noise conditions and achieve land use compatibility relating to noise conditions. Noise and land use elements are, therefore, closely related. By identifying noise-sensitive land uses, such as residential uses, and establishing compatibility guidelines for land use and noise, planners can use the noise element to influence the general distribution, location, and intensity of future land uses at the former Fort Ord.

The noise element is also closely related to the circulation element. Noise from roadway traffic is the primary source of noise in the Fort Ord area. Circulation routes can be located to minimize noise impacts on noise-sensitive uses. Noise-sensitive uses can also be located to avoid impacts from aircraft accessing local airports.

Like the other elements in the Fort Ord Reuse Plan, this noise element presents a description of existing conditions. Existing noise conditions are presented for unincorporated Monterey County and the cities of Marina and Seaside separately to identify the sources of noise characteristic of each jurisdiction. The description of the existing noise environment is followed by a description of the future buildout noise conditions that are expected to occur with implementation of the Fort Ord Reuse Plan.

### 4.5.2 Summary of Existing Conditions

Following is a general discussion and description of existing environmental noise conditions at the former Fort Ord. This discussion is based on detailed descriptions of existing noise conditions, as provided in the report entitled Other Physical Attributes Baseline Study of Fort Ord, California (U.S. Army Corps of Engineers, Sacramento District 1992) and the setting section of Volume I of the Fort Ord Disposal and Reuse Final Environmental Impact Statement (U.S. Army Corps of Engineers, Sacramento District 1993). Other relevant baseline data and information are provided in the Draft Environmental Assessment/Environmental Impact Report for the City of Marina, California Airport Plans Permits, U.C. Technology Center, Airport Area General Plan and Zoning Amendments and Redevelopment Plan (City of Marina 1995). The general plan noise elements and associated documents for the City of Marina (City of Marina 1982), City of Seaside (City of Seaside 1990), and Monterey County (County of Monterey 1982) also contain useful information.

Section 4.5.6 of this document provides general background information on acoustics, terms, and commonly used terminology used in acoustics.

*Goal: To protect people who live, work, and recreate in and around the former Fort Ord from the harmful effects of exposure to excessive noise; to provide noise environments that enhance and are compatible with existing and planned uses; and to protect the economic base of the former Fort Ord by preventing encroachment of incompatible land uses within areas affected by existing or planned noise-producing uses.*



**4.5.2.1 City of Marina**

Traffic on roadways is the major source of noise within the City of Marina. Major highways and roadways within the city include:

- State Route (SR) 1,
- Del Monte Boulevard,
- Reservation Road,
- Blanco Road, and
- Imjin Road.

Table 4.5-1 summarizes existing traffic noise (1991-1992, depending on the roadway segment) modeling results for these roadways taken from the Other Physical Attributes Baseline Study of Fort Ord, California report.

Aircraft activity around Fritzsche Field was once a major source of noise in the area. However, with the closure of Fort Ord, the airfield is no longer used for military operations. The airfield has been turned over to the City of Marina and is now the Marina Municipal Airport. Because the facility is in a state of transition, valid aircraft noise exposure data for existing conditions is not available.

Freight rail service is provided to the former Fort Ord and local industries via the Southern Pacific tracks that run parallel to SR 1 through the former Fort Ord. A spur line parallel to Del Monte Boulevard in the cities of Marina and Seaside provides service to these cities. Service to local industries is provided approximately two to three times a week. Because of the infrequency of train activity, noise from these operations is not a major concern.

Noise sensitive land uses in and around the former Fort Ord are limited primarily to residential and recreational uses. Refer to the Land Use Element to locate specific noise sensitive land uses.

**4.5.2.2 City of Seaside**

Traffic on roadways is the major source of noise within the City of Seaside. Major highways and roadways within the city include:

- SR 1,
- SR 68,
- SR 218,
- Fremont Boulevard,
- Del Monte Boulevard,
- General Jim Moore Boulevard, and
- Broadway Avenue.



**Table 4.5- 1.  
Summary of Traffic Noise Analysis for Existing Conditions (1990-1992)**

Roadway	Segment	Ldn at 100 Feet from Centerline of Roadway (dB)	Distance (in feet) from Centerline of Roadway to Ldn Contour Line		
			65 Ldn	60 Ldn	55 Ldn
<b>SR 1</b>	SR 68 to Del Monte Avenue	73.9	392	845	1,820
	Del Monte Avenue to SR 218	74.2	411	884	1,905
	SR 218 to Ord Village interchange	74.1	404	871	1,876
	Ord Village Interchange to 0.5 mile north of Ord Village	74.7	443	955	2,057
	0.5 mile north of Ord Village to Main Gate	75.3	486	1,047	2,256
	Main Gate to 12th Street Gate	74.7	443	955	2,057
	12th Street Gate to South Marina interchange	75.1	471	1,015	2,188
	South Marina interchange to Reservation Road	72.6	321	692	1,491
<b>SR 218</b>	SR 1 to Fremont Boulevard	64.3	90	193	417
	Fremont Boulevard to SR 68	64	86	185	398
<b>SR 68</b>	SR 1 to SR 218	64	86	185	398
	SR 218 to Toro Park	67.3	142	307	661
	Toro Park to Spreckels Boulevard	70.6	236	509	1,096
	Spreckels Boulevard to Blanco Road	68.5	171	369	794
<b>Reservation Road</b>	Del Monte Boulevard to Marina city limit	66.1	118	255	550
	Marina city limit to East Garrison Road	66.4	124	267	575
	East Garrison Road to SR 68	59.4	42	91	196
<b>Davis Road</b>	Blanco Road to Market Street	63	74	158	341
<b>Del Monte Boulevard</b>	Marina city limit to SR 1	65.9	115	247	533
<b>Blanco Road</b>	Reservation Road to Davis Road	65.7	111	240	517
<b>Fremont Boulevard</b>	South of SR 218	65.1	102	219	471
	SR 218 to Broadway Avenue	65.3	105	226	486
	Broadway Avenue to SR 1	64	86	185	398
<b>Broadway Avenue</b>	Del Monte Boulevard to Fremont Boulevard	60.5	50	108	233
	Fremont Boulevard to General Jim Moore Blvd.	61.6	59	128	275
<b>Del Monte Boulevard</b>	SR 218 to Broadway Avenue	63.8	83	179	386
	Broadway Avenue to Fremont Boulevard	61.9	62	134	288
<b>Imjin Road</b>	Abrams Drive to Reservation Road	63.5	79	171	369
<b>Inter-Garrison Road</b>	8th Street to East Garrison Road	55.9	25	53	115
<b>General Jim Moore Blvd.</b>	North of Broadway	56	25	54	117

Source: U.S. Army Corps of Engineers, Sacramento District (1992)



Table 4.5-1 summarizes existing traffic noise modeling results for these roadways taken from the Other Physical Attributes Baseline Study of Fort Ord report.

Aircraft activity around Monterey Peninsula Airport is another significant source of noise in Seaside. Figure 4.5-1 depicts noise contours around the airport. The 55-60 CNEL contour affects only a small portion of the southerly limits of the City of Seaside. According to the Federal Aviation Regulation Part 150 Noise Compatibility Program for the airport, no residential units in Seaside would require mitigation as a result of adoption of the Comprehensive Land Use Plan for the Monterey Peninsula Airport.

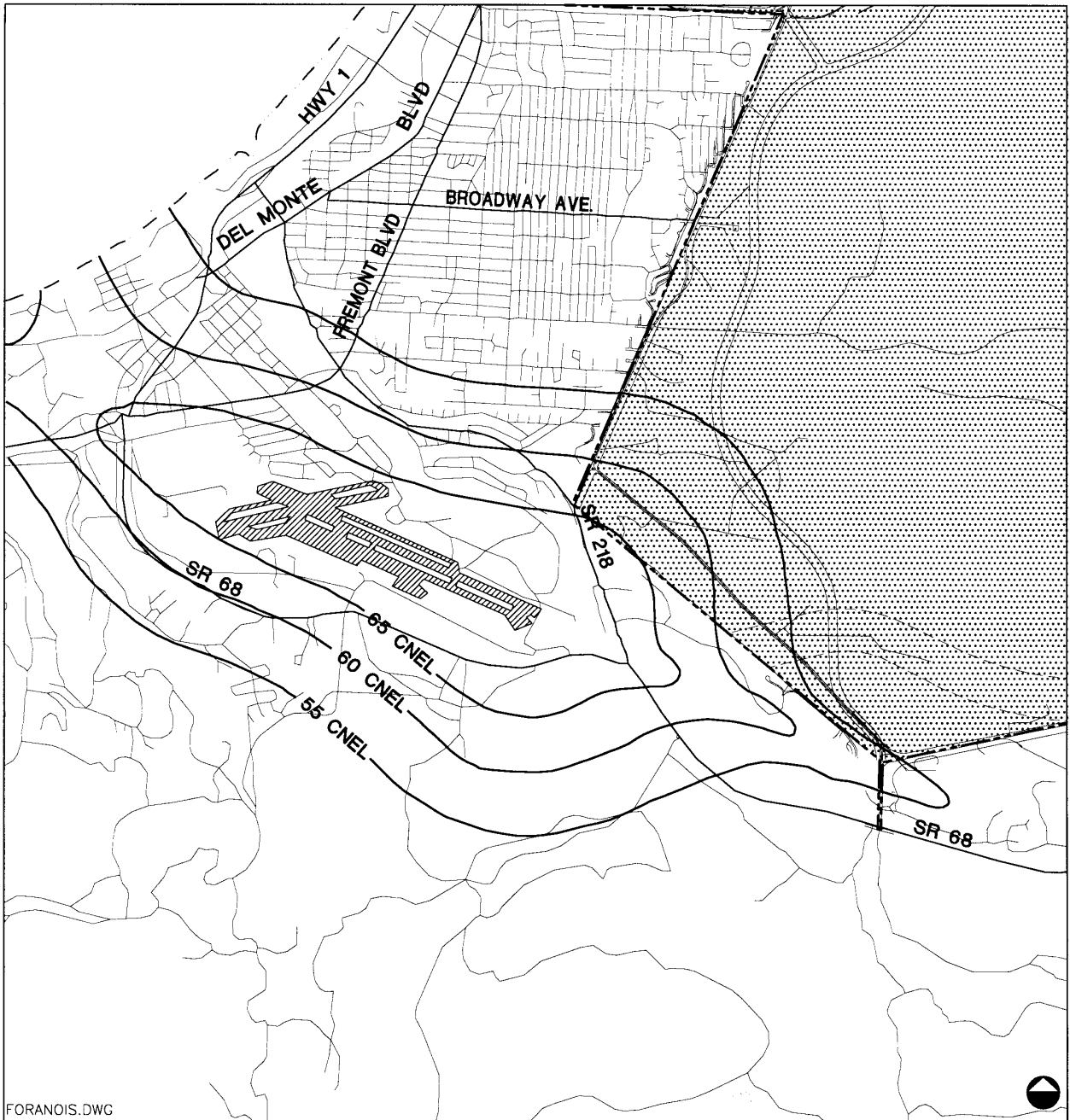
As discussed previously, the Southern Pacific spur line paralleling Del Monte Boulevard provides service to the City of Seaside. Because of the infrequency of train activity, noise from these operations is not a major concern.

Noise sensitive land uses in and around the former Fort Ord are limited primarily to residential areas and recreational areas. Refer to the Land Use Element to locate specific noise sensitive land uses.

**4.5.2.3 Monterey County**

Unincorporated Monterey County, in the vicinity of the former Fort Ord, does not have major or large-scale noise problems. Although noise associated with firing ranges and aircraft operations at Fort Ord was once a source of occasional complaints, closure of Fort Ord has eliminated these operations as a source of noise. Traffic on highways and roadways is the primary source of noise in the county. Major highways and roadways in the county near the former Fort Ord include:

- SR 1,
- SR 68,
- SR 183,
- SR 218,
- Fremont Boulevard,
- Del Monte Boulevard,
- General Jim Moore Boulevard,
- Reservation Road,
- Blanco Road,
- Imjin Road,
- East Garrison Road,
- Davis Road, and
- Blanco Road



SOURCE: Jones & Stokes, 1995; Reimer Associates, (Re-projected), 1995; Monterey Co., 1995; EDAW, 1996.



**LEGEND.**

— CNEL Noise Contour

**FIGURE 4.5-1  
NOISE CONTOURS FOR  
MONTEREY PENINSULA AIRPORT**





Table 4.5-1 summarizes traffic noise modeling results for these roadways taken from the Other Physical Attributes Baseline Study of Fort Ord report.

Aircraft activity around Monterey Peninsula Airport is another significant source of noise in the area. Figure 4.5-1 depicts noise contours around the airport. Although industrial facilities, food-packing plants, and several mining operations are located in the county, none of these operations creates noise conflicts in the vicinity of the former Fort Ord.

As discussed previously, the Southern Pacific spur line parallel to Del Monte Boulevard provides service to the City of Marina. Because of the infrequency of train activity, noise from these operations is not a major concern.

Noise sensitive land uses in and around the former Fort Ord are limited primarily to residential areas and recreational areas. Refer to the Land Use Element to locate specific noise sensitive land uses.

### 4.5.3 Summary of Future Conditions

Traffic noise conditions that are expected to occur in 2015 with implementation of the Fort Ord Reuse Plan have been estimated based on projected 2015 traffic volumes, as detailed in JHK and Associates (1995). These traffic noise conditions are summarized in Table 4.5-2. Traffic noise conditions under buildout of the Fort Ord Reuse Plan are qualitatively discussed below based on these 2015 estimates of traffic noise.

#### 4.5.3.1 City of Marina

Since a doubling of traffic volumes is generally required before a perceptible increase (equivalent to a 3-dB increase) in traffic noise can occur, traffic noise levels under buildout of the Fort Ord Reuse Plan are likely to be within about 1-2 dB of the noise levels presented in Table 4.5-2 for 2015. For all of the roadways evaluated, traffic noise is predicted to exceed the City of Marina's compatibility criteria for residential uses at 100 feet from the roadway centerlines. In almost all cases, at least several hundred feet would be needed between roads and residential areas before noise is reduced to below 60 dB- $L_{dn}$ . The Fort Ord Reuse Plan includes a multi-modal corridor that would traverse the City of Marina. Issues that are unresolved at this time relating to the corridor include the type of facility (rail, light rail, bus, or exclusive high-occupancy vehicles), operating hours, and frequency of service. Therefore, potential noise impacts generated by use of the corridor cannot be predicted.

The only new source of noise not related to transportation that may potentially occur in Marina with implementation of the Fort Ord Reuse Plan would be an amphitheater. The area proposed for the amphitheater is proposed for annexation into the City of Marina.

Aircraft activity around Marina Municipal Airport would also be a significant source of noise in the City of Marina. Figure 4.5-2 depicts projected noise contours around the airport in the year 2015.

**Table 4.5-2. Summary of Noise Modeling for the Fort Ord Reuse Plan in 2015<sup>1</sup>**  
**Page 1 of 2**



Roadway	Segment	Ldn at 100 Feet from Centerline of Roadway (dB)	Distance (in feet) from Centerline of Roadway to Ldn Contour Line			
			70 Ldn	65 Ldn	60 Ldn	55 Ldn
SR 1	SR 68 to Del Monte Avenue	74	175	377	813	1,752
	Del Monte Avenue to SR 218	75	209	451	971	2,093
	SR 218 to Fremont Boulevard	76	233	502	1,082	2,330
	Fremont Boulevard to Main Gate	75	232	501	1,078	2,323
	Main Gate to 12th Street Gate	75	226	487	1,049	2,260
	12th Street Gate to South Marina interchange (Del Monte Boulevard)	75	221	476	1,025	2,209
	South Marina (Del Monte Boulevard) to Reservation Road	73	161	347	748	1,612
	Reservation Road to North Marina (Del Monte Boulevard)	73	149	320	689	1,485
	North Marina (Del Monte Boulevard) to SR 156	73	159	342	736	1,586
SR 156 to County line	74	185	398	858	1,849	
SR 218	SR 1 to Fremont Boulevard	65	48	103	221	476
	Fremont Boulevard to North-South Road	67	63	135	291	628
	General Jim Moore Blvd. to SR 68	68	77	165	356	766
SR 68	SR 1 to SR 218	74	172	370	797	1,716
	SR 218 to San Benancio Road	71	121	260	561	1,209
	San Benancio Road to Reservation Road	73	162	349	752	1,621
	Reservation Road to E. Blanco Road	72	131	283	610	1,314
Old Highway 68	State Highway 218 to San Benancio Road	66	53	114	245	527
Reservation Road	SR 1 to Del Monte Boulevard	61	25	55	118	254
	Del Monte Boulevard to Crescent Avenue	65	44	95	204	439
	Crescent Avenue to Imjin Road	69	82	176	378	815
	Imjin Road to Blanco Road	70	93	201	433	932
	Blanco Road to Inter-Garrison Road	65	48	104	225	484
	Inter-Garrison Road to Davis Road	65	47	101	217	467
	Davis Road to SR 68	65	48	104	223	481

**Table 4.5-2. Continued**  
**Page 2 of 2**

Roadway	Segment	Ldn at 100 Feet from Centerline of Roadway (dB)	Distance (in feet) from Centerline of Roadway to Ldn Contour Line			
			70 Ldn	65 Ldn	60 Ldn	55 Ldn
Davis Road	Reservation Road to Blanco Road	64	42	90	194	417
	Blanco Road to Rosi Street (SR 183)	64	42	90	193	416
	Rosi Street (SR 183) to US 101	67	59	128	275	593
Del Monte Boulevard	SR 1 to Reservation Road	67	65	140	301	649
	SR 1 to Broadway Avenue	66	54	116	249	537
	Broadway Avenue to Fremont Boulevard	61	26	56	121	261
	SR 1 (South Marina) to Reservation Road	66	54	116	250	539
	Reservation Road to SR 1 (North Marina)	65	43	93	201	432
Blanco Road	Reservation Road to Davis Road	70	101	217	468	1,009
	Davis Road to SR 68	65	44	95	204	441
	SR 68 to US 101	69	86	186	400	862
Fremont Boulevard	SR 1 / SR 68 to Broadway Avenue	65	49	106	227	490
	Broadway Avenue to SR 1	65	47	101	218	471
Broadway Avenue	Del Monte Boulevard to Noche Buena Street	64	37	80	172	370
	Noche Buena Street to North-South Road	63	34	74	159	343
SR 156	SR 1 to 0.1 miles east of Castroville Boulevard	71	118	253	546	1,176
	0.1 miles east of Castroville Boulevard to U.S. 101	72	129	279	600	1,293
SR 183	US 101 to Davis Road	69	85	183	395	851
	Davis Road to Espinosa Road	71	114	245	529	1,139
	Espinosa Road to SR 156	72	133	286	617	1,328

<sup>1</sup> Notes: Based on transportation data provided by Klim (pers. comm.)





### **4.5.3.2 City of Seaside**

As discussed previously, noise levels under buildout of the Fort Ord Reuse Plan would be expected to be within 1 to 2 dB of those presented in Table 4.5-2. For all of the roadways evaluated, traffic noise is predicted to exceed the City of Seaside's compatibility criteria for residential uses at 100 feet from the roadway center lines. In almost all cases, at least several hundred feet would be needed between roads and residential areas before noise is reduced to below 60 dB-L<sub>dn</sub>.

No new non-transportation-related sources of noise are proposed to be located in Seaside under the Fort Ord Reuse Plan.

Aircraft activity around Monterey Peninsula Airport would continue to be a significant source of noise in the City. Figure 4.5-3 depicts projected noise contours around the airport in the year 2010.

### **4.5.3.3 Monterey County**

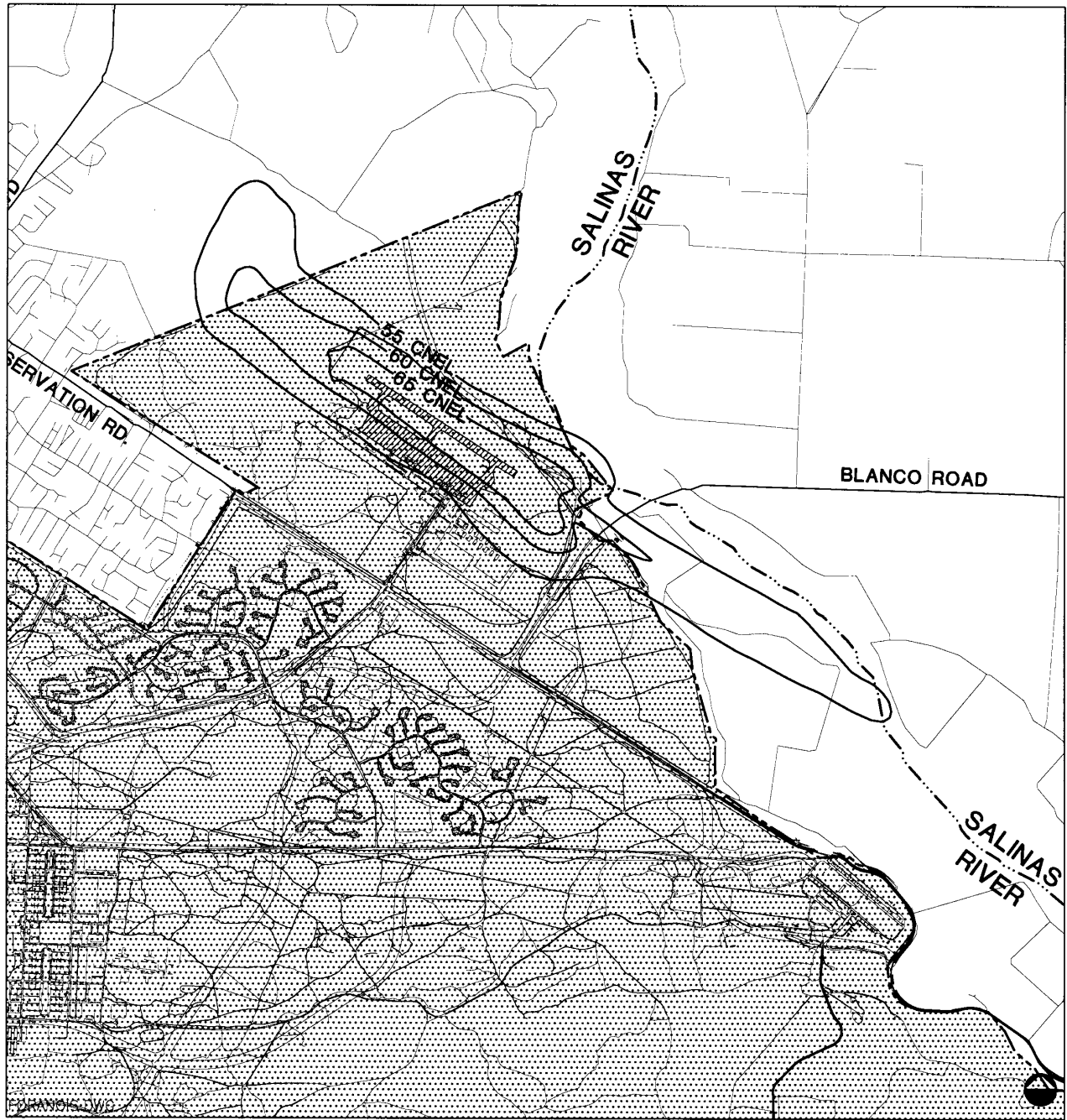
Noise levels in unincorporated Monterey County under buildout conditions would be expected to be within 1 to 2 dB of those presented in Table 4.5-2. For all of the roadways evaluated, traffic noise is predicted to exceed the county's compatibility criteria for residential uses at 100 feet from the roadway center lines. For almost all roadways, at least several hundred feet would be needed between roads and residential areas before noise is reduced to below 60 dB-L<sub>dn</sub>. The multi-modal corridor discussed above would also potentially affect Monterey County.

Potential new sources of noise that would occur in the County include the public amphitheater mentioned above, a desalination facility, a peace officers training facility, and a transit center. New noise-sensitive land uses include residential areas, open space/recreation areas, and educational facilities. Aircraft activity around Monterey Peninsula Airport would continue to be a significant source of noise in the County (Figure 4.5-3).

## **4.5.4 Objectives**

*Objective A: Ensure that application of land use compatibility criteria for noise and enforcement of noise regulations are consistent throughout the Fort Ord Planning area.*

The cities of Marina and Seaside and Monterey County have identified compatibility criteria for noise in their general plans. The three jurisdictions use different definitions and quantitative standards for determining noise compatibility. For example, Monterey County identifies 50-55 dB-L<sub>dn</sub> as being normally acceptable for low-density residential uses and 50-60 dB-L<sub>dn</sub> as being normally acceptable for multi-family residential uses. The City of Seaside General Plan does not specifically identify criteria for residential uses, but states that 60 dB-L<sub>dn</sub> is generally recommended for outdoor activities of noise-sensitive areas. The City of Marina General Plan allows a maximum of 60 dB-L<sub>dn</sub> for low-density residential and 65 dB-L<sub>dn</sub> for multi-family residential uses.



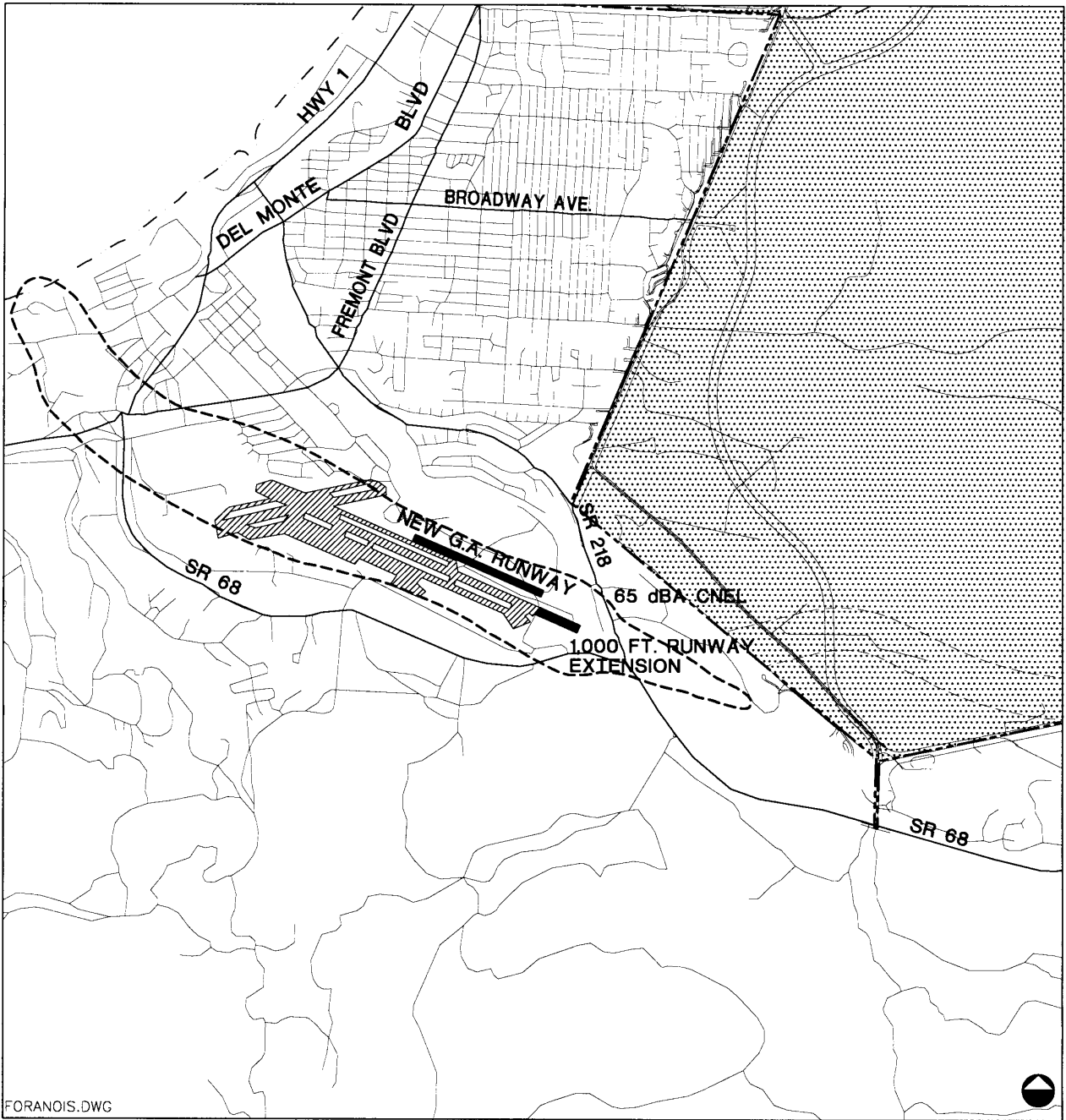
SOURCE: Jones & Stokes, 1995; Reimer Associates, (Re-projected), 1995; Monterey Co., 1995; EDAW, 1996.



**LEGEND:**

— CNEL Noise Contour

FIGURE 4.5-2  
**FORECAST YEAR 2015  
AIRPORT NOISE CONTOURS**



SOURCE: Jones & Stokes, 1995; Reimer Associates, (Re-projected), 1995; Monterey Co., 1995; EDAW, 1996.



**LEGEND:**

- CNEL Noise Contour - Adjusted for Runway Improvements

FIGURE 4.5-3  
**FORECAST YEAR 2010 AND CNEL 65db  
 NOISE CONTOUR FOR MONTEREY PENINSULA AIRPORT**



The policies under this objective recommend adoption of a consistent set of land use compatibility criteria for application within the former Fort Ord, based on Monterey County’s criteria, which are the most consistent with the guidelines adopted by the Office of Noise Control in the California Department of Health Services and are the most conservative and detailed criteria of the three jurisdictions. The policies also specify quantitative performance standards for non-transportation noise sources.

*Objective B: Ensure through land use planning that noise environments are appropriate for and compatible with existing and proposed land uses based on criteria provided in the noise element.*

Application of noise compatibility criteria in the land use planning process will ensure that noise will not degrade noise-sensitive environments, such as residential and open space/recreation land uses. Application of compatibility criteria will also help to protect the economic base of the former Fort Ord by preventing noise-sensitive uses from encroaching into noisy commercial or industrial areas. If compatibility standards are not applied, residential uses could be built around noise-generating commercial or industrial uses. Noise complaints from residences would exert pressure on commercial or industrial operations to relocate or implement expensive noise-control measures, thereby potentially adversely affecting the local economy.

**4.5.5 Policies and Programs**

**City of Marina**

*Objective A: Ensure that application of land use compatibility criteria for noise and enforcement of noise regulations are consistent throughout the Fort Ord Planning area.*

**Noise Policy A-1:** The City shall coordinate with the other local entities having jurisdiction within the former Fort Ord in establishing a consistent set of guidelines for controlling noise.

Program A-1.1: The City shall adopt the land use compatibility criteria for exterior community noise shown in Table 4.5-3 for application in the former Fort Ord.

Program A-1.2: The City shall adopt a noise ordinance to control noise from non-transportation sources, including construction noise, that incorporates the performance standards shown in Table 4.5-4, for application in the former Fort Ord.

*Objective B. Ensure through land use planning that noise environments are appropriate for and compatible with existing and proposed land uses based on noise guidelines provided in the noise element.*

**Noise Policy B-1:** The City shall ensure that the noise environments for existing residences and other existing noise-sensitive uses do not exceed the noise guidelines presented in Tables 4.5-3 and 4.5-4, where feasible and practicable.



**Table 4.5-3  
Land Use Compatibility Criteria for Exterior Community Noise**

Land Use Category	Noise Ranges (Ldn or CNEL) dB			
	I	II	III	IV
Passively used open spaces	50	50-55	55-70	70+
Auditoriums, concert halls, amphitheaters	45-50	50-65	65-70	70+
Residential—low density single family, duplex, mobile homes	50-55	55-60	70-75	75+
Residential—multi-family	50-60	60-65	70-75	75+
Transient lodging—motels, hotels	50-60	60-70	70-80	80+
Schools, libraries, churches, hospitals, nursing homes	50-60	60-70	70-80	80+
Actively used open spaces—playgrounds, neighborhood parks	50-67	---	67-73	73+
Golf courses, riding stables, water recreation, cemeteries	50-70	---	70-80	80+
Office buildings, business, commercial and professional	50-67	67-75	75+	---
Industrial, manufacturing, utilities, agriculture	50-70	70-75	75+	---

Notes:

Noise ranges are applicable at the property line.

Noise Range I—Normally acceptable: Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Noise Range II—Conditionally acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Noise Range III—Normally unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Noise Range IV—Clearly unacceptable: New construction or development should generally not be undertaken.

Source: Monterey County Planning Department (1982).





**Table 4.5-4  
Noise Level Performance Standards for Non-Transportation  
Noise Sources**

Exterior Noise Level Standards, DBA		
Cumulative Number of Minutes Allowed in Any One-Hour Time Period	Daytime (7:00 a.m. - 10:00 p.m.)	Nighttime (10:00 p.m. - 7:00 a.m.)
30	45	40
15	50	45
5	55	50
1	60	55
0	65	60

Note: Noise Ranges are applicable at the property line.

Program B-1.1: The City shall develop and implement a program that identifies currently developed areas that are adversely affected by noise impacts and implement measures to reduce these impacts, such as constructing noise barriers and limiting the hours of operation of the noise sources.

Program B-1.2: Wherever practical and feasible, the City shall segregate sensitive receptors, such as residential land uses, from noise generators through land use.

**Noise Policy B-2:** By complying with the noise guidelines presented in Tables 4.5-3 and 4.5-4, the City shall ensure that new development does not adversely affect existing or proposed uses.

Program B-2.1: See description of Program A-1.1 above.

Program B-2.2: See description of Program A-1.2 above.

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

**Noise Policy B-4:** The City shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) which require that interior sound levels of 45 dB-L<sub>dn</sub> be achieved for new multi-family dwelling, condominium, hotel, and motel uses.



**Noise Policy B-5:** If, through site planning or the architectural layout of buildings, it is not feasible or practicable to comply with the noise guidelines presented in Tables 4.5-3 and 4.5-4, the City shall require the following, as conditions to approval: that noise barriers be provided for new development to ensure that the noise guidelines are met; or that acoustical treatments be provided for new buildings to ensure that interior noise levels would be reduced to less than 45 dB- $L_{dn}$ .

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

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

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

**Noise Policy B-9:** The City shall require construction contractors to employ noise-reducing construction practices.

**City of Seaside**

*Objective A: Ensure that application of land use compatibility criteria for noise and enforcement of noise regulations are consistent throughout the Fort Ord Planning area.*

**Noise Policy A-1:** The City shall coordinate with the other local entities having jurisdiction within the former Fort Ord in establishing a consistent set of guidelines for controlling noise.

Program A-1.1: The City shall adopt the land use compatibility criteria for exterior community noise shown in Tables 4.5-3 for application in the former Fort Ord.

Program A-1.2: The City shall adopt a noise ordinance to control noise from non-transportation sources, including construction noise, that incorporates the performance standards shown in Table 4.5-4, for application in the former Fort Ord.



*Objective B: Ensure through land use planning that noise environments are appropriate for and compatible with existing and proposed land uses based on noise guidelines provided in the noise element.*

**Noise Policy B-1:** The City shall ensure that the noise environments for existing residences and other existing noise-sensitive uses do not exceed the noise guidelines presented in Tables 4.5-3 and 4.5-4, where feasible and practicable.

Program B-1.1: The City shall develop and implement a program that identifies currently developed areas that are adversely affected by noise impacts and implement measures to reduce these impacts, such as constructing noise barriers and limiting the hours of operation of the noise sources.

Program B-1.2: Wherever practical and feasible, the City shall segregate sensitive receptors, such as residential land uses, from noise generators through land use.

**Noise Policy B-2:** By complying with the noise guidelines presented in Tables 4.5-3 and 4.5-4, the City shall ensure that new development does not adversely affect existing or proposed uses.

Program 3-2.1: See description of Program A-1.1 above.

Program 3-2.2: See description of Program A-1.2 above.

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

**Noise Policy B-4:** The City shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) which require that interior sound levels of 45 dB-L<sub>dn</sub> be achieved for new multi-family dwelling, condominium, hotel, and motel uses.

**Noise Policy B-5:** If, through site planning or the architectural layout of buildings, it is not feasible or practicable to comply with the noise guidelines presented in Tables 4.5-3 and 4.5-4, the City shall require the following, as conditions to approval: that noise barriers be provided for new development to ensure that the noise guidelines are met; or that acoustical treatments be provided for new buildings to ensure that interior noise levels would be reduced to less than 45 dB-L<sub>dn</sub>.

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



is within the normally acceptable noise range for residential uses, new development shall not increase the ambient DNL by more than 5 dBA measured at the property line.

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

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

**Noise Policy B-9:** The City shall require construction contractors to employ noise-reducing construction practices.

**Monterey County**

*Objective A: Ensure that application of land use compatibility criteria for noise and enforcement of noise regulations are consistent throughout the Fort Ord Planning area.*

**Noise Policy A-1:** The County shall coordinate with the other local entities having jurisdiction within the former Fort Ord in establishing a consistent set of guidelines for controlling noise.

Program A-1.1: The County shall adopt the land use compatibility criteria for exterior community noise shown in Tables 4.5-3 for application in the former Fort Ord.

Program A-1.2: The County shall adopt a noise ordinance to control noise from non-transportation sources, including construction noise, that incorporates the performance standards shown in Table 4.5-4, for application in the former Fort Ord.

*Objective B: Ensure through land use planning that noise environments are appropriate for and compatible with existing and proposed land uses based on noise guidelines provided in the noise element.*

**Noise Policy B-1:** The County shall ensure that the noise environments for existing residences and other existing noise-sensitive uses do not exceed the noise guidelines presented in Tables 4.5-3 and 4.5-4, where feasible and practicable.

Program B-1.1: The County shall develop and implement a program that identifies currently developed areas that are adversely affected by noise impacts and implement measures to reduce these impacts, such as constructing noise barriers and limiting the hours of operation of the noise sources.



Program B-1.2: Wherever practical and feasible, the County shall segregate sensitive receptors, such as residential land uses, from noise generators through land use.

**Noise Policy B-2:** By complying with the noise guidelines presented in Tables 4.5-3 and 4.5-4, the County shall ensure that new development does not adversely affect existing or proposed uses.

Program 3-2.1: See description of Program A-1.1 above.

Program 3-2.2: See description of Program A-1.2 above.

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

**Noise Policy B-4:** The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) which require that interior sound levels of 45 dB- $L_{dn}$  be achieved for new multi-family dwelling, condominium, hotel, and motel uses.

**Noise Policy B-5:** If, through site planning or the architectural layout of buildings, it is not feasible or practicable to comply with the noise guidelines presented in Tables 4.5-3 and 4.5-4, the County shall require the following, as conditions to approval: that noise barriers be provided for new development to ensure that the noise guidelines are met; or that acoustical treatments be provided for new buildings to ensure that interior noise levels would be reduced to less than 45 dB- $L_{dn}$ .

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

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



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

**Noise Policy B-9:** The County shall require construction contractors to employ noise-reducing construction practices.

## 4.5.6 Glossary of Acoustic Terms and Guidelines

### Sound Terminology

Sound travels through the air as waves of minute air pressure fluctuations caused by some type of vibration. In general, sound waves travel away from the sound source as an expanding spherical surface. The energy contained in a sound wave is consequently spread over an increasing area as it travels away from the source. This results in a decrease in loudness at greater distances from the sound source. The following terms are commonly used in acoustics.

**Decibel:** Sound-level meters measure the pressure fluctuations caused by sound waves. Because of the ability of the human ear to respond to a wide dynamic range of sound pressure fluctuations, loudness is measured in terms of decibels (dB) on a logarithmic scale. This results in a scale that measures pressure fluctuations in a convenient notation and corresponds to our auditory perception of increasing loudness.

**A-Weighted Decibels:** Most sounds consist of a broad range of sound frequencies. Because the human ear is not equally sensitive to all frequencies, several frequency-weighting schemes have been used to develop composite decibel scales that approximate the way the human ear responds to sound levels. The “A-weighted” decibel scale (dBA) is the most widely used for this purpose.

**Equivalent Sound Level:** Time-varying sound levels are often described in terms of an equivalent constant decibel level. Equivalent sound levels ( $L_{eq}$ ) are used to develop single-value descriptions of average sound exposure over various periods of time. Such average sound exposure values often include additional weighting factors for annoyance potential attributable to time of day or other considerations. The  $L_{eq}$  data used for these average sound exposure descriptors are generally based on A-weighted sound-level measurements.

**Day-Night Average Sound Level:** Average sound exposure over a 24-hour period is often presented as a day-night average sound level ( $L_{dn}$ ).  $L_{dn}$  values are calculated from hourly  $L_{eq}$  values, with the  $L_{eq}$  values for the nighttime period (10:00 p.m.-7:00 a.m.) increased by 10 dB to reflect the greater disturbance potential from nighttime noises.

**Community Noise Equivalent Level:** The community noise equivalent level (CNEL) is also used to characterize average sound levels over a 24-hour period, with weighting factors included for evening and nighttime sound levels.  $L_{eq}$



values for the evening period (7:00 p.m.-10:00 p.m.) are increased by 5 dB, whereas  $L_{dn}$  values for the nighttime period (10:00 p.m.-7:00 a.m.) are increased by 10 dB. For given set of sound measurements, the CNEL value will usually be about 1 dB higher than the  $L_{dn}$  value. In practice, CNEL and  $L_{dn}$  are often used interchangeably.

**Percentile-Exceeded Sound Level:** The sound level exceeded during a given percentage of a measurement period is the percentile-exceeded sound level ( $L_x$ ). Examples include  $L_{10}$ ,  $L_{50}$ , and  $L_{90}$ .  $L_{10}$  is the A-weighted sound level that is exceeded 10% of the measurement period,  $L_{50}$  is the level exceeded 50% of the period, and so on.  $L_{90}$  is often considered to represent the ambient sound level.

**Ambient Sound:** Ambient sound is the all-encompassing sound associated with a given community site, usually being a composite of sounds from many sources, near and far, with no particular sound being dominant.

### Equivalencies Between Various Sound Descriptors

The  $L_{dn}$  value at a site calculated from a set of measurements taken over a given 24-hour period will be slightly lower than the CNEL value calculated over the same period. Except in situations where unusually high evening sound levels occur, the CNEL value will be within 1.5 dB of the  $L_{dn}$  value for the same set of sound measurements.

The relationship between peak hourly  $L_{eq}$  values and associated  $L_{dn}$  values depends on the distribution of traffic over the entire day. There is no precise way to convert a peak hourly  $L_{eq}$  value to an  $L_{dn}$  value. However, in urban areas near heavy traffic, the peak hourly  $L_{eq}$  value is typically 2-4 dB lower than the daily  $L_{dn}$  value. In less heavily developed areas, the peak hourly  $L_{eq}$  is often equal to the daily  $L_{dn}$  value. For rural areas with little nighttime traffic, the peak hourly  $L_{eq}$  value will often be 3-4 dB greater than the daily  $L_{dn}$  value.

### Working With Decibel Values

The nature of the decibel scale is such that the individual sound levels for different sound sources cannot be added directly to give the combined sound level of these sources. Two sound sources producing equal sound levels at a given location will produce a composite sound level that is 3 dB greater than either sound alone. When two sound sources differ by 10 dB, the composite sound level will be only 0.4 dB greater than the louder source alone.

Most people have difficulty distinguishing the louder of two sound sources if they differ by less than 1.5-2.0 dB. Research into the human perception of changes in sound level indicates the following:

- a 3-dB change is just perceptible,
- a 5-dB change is clearly perceptible, and
- a 10-dB change is perceived as being twice or half as loud.



A doubling or halving of acoustic energy will change the resulting sound level by 3 dB, which corresponds to a change that is just perceptible. In practice, this means that a doubling of traffic volume on a roadway, doubling the number of people in a stadium, or doubling the number of wind turbines in a wind farm will, as a general rule, only result in a 3-dB, or just perceptible, increase in noise.

### Outdoor Sound Propagation

There are a number of factors that affect how sound propagates outdoors. These factors, described by Miller (1982), are summarized below.

**Distance Attenuation:** As a general rule, sound from localized or point sound sources spreads out as it travels away from the source and the sound level drops at a rate of 6 dB per doubling of distance. If the sound source is long in one dimension, such as traffic on a highway or a long train, the sound source is considered to be a line source. As a general rule, the sound level from a line source will drop off at a rate of 3 dB per doubling of distance. If the intervening ground between the line source and the receptor is acoustically “soft” (e.g., ground vegetation, scattered trees, clumps of bushes), an attenuation rate of 4.5 dB per doubling of distance is generally used.

**Attenuation from Barriers:** Any solid structure such as a berm, wall, or building that blocks the line of sight between a source and receiver serves as a sound barrier and will result in additional sound attenuation. The amount of additional attenuation is a function of the difference between the length of the sound path over the barrier and the length of the direct line of sight path. Thus, the sound attenuation of a barrier between a source and a receiver that are very far apart will be much less than the attenuation that would result if either the source or the receiver is very close to the barrier.

**Molecular Absorption:** Air absorbs sound energy as a function of the temperature, humidity of the air, and frequency of the sound. Additional sound attenuation on the order of 1 to 2 dB per 1,000 feet can occur.

**Anomalous Excess Attenuation:** Large-scale effects of wind speed, wind direction, and thermal gradients in the air can cause large differences in sound transmission over large distances. These effects when combined result in anomalous excess attenuation, which can be applied to long-term sound-level estimates. Additional sound attenuation on the order of about 1 dB per 1,000 feet can occur.

**Other Atmospheric Effects:** Short-term atmospheric effects relating to wind and temperature gradients can cause bending of sound waves and can influence changes in sound levels at large distances. These effects can either increase or decrease sound levels, depending on the orientation of the source and receptor





and the nature of the wind and temperature gradient. Because these effects are normally short-term, it is generally not practical to include them in sound propagation calculations. Understanding these effects, however, can help explain variations that occur between calculated and measured sound levels.

### **Guidelines For Interpreting Sound Levels**

Various federal, state, and local agencies have developed guidelines for evaluating land use compatibility under different sound-level ranges. A summary of federal and state guidelines follows.

**Federal Agency Guidelines:** The federal Noise Control Act of 1972 (Public Law 92-574) established a requirement that all federal agencies administer their programs to promote an environment free of noise that jeopardizes public health or welfare. EPA was given the responsibility for:

- providing information to the public regarding identifiable effects of noise on public health or welfare,
- publishing information on the levels of environmental noise that will protect the public health and welfare with an adequate margin of safety,
- coordinating federal research and activities related to noise control, and
- establishing federal noise emission standards for selected products distributed in interstate commerce.

The federal Noise Control Act also directed that all federal agencies comply with applicable federal, state, interstate, and local noise control regulations.

Although EPA was given major public information and federal agency coordination roles, each federal agency retains authority to adopt noise regulations pertaining to agency programs. EPA can require other federal agencies to justify their noise regulations in terms of the federal Noise Control Act policy requirements. The Occupational Safety and Health Administration retains primary authority for setting workplace noise exposure standards. The Federal Aviation Administration retains primary jurisdiction over aircraft noise standards, and the Federal Highway Administration (FHWA) retains primary jurisdiction over highway noise standards.

In 1974, in response to the requirements of the federal Noise Control Act, EPA identified indoor and outdoor noise limits to protect public health and welfare (communication disruption, sleep disturbance, and hearing damage). Outdoor  $L_{dn}$  limits of 55 dB and indoor  $L_{dn}$  limits of 45 dB are identified as desirable to protect against speech interference and sleep disturbance for residential, educational, and health care areas. Sound-level criteria to protect against hearing damage in commercial and industrial areas are identified as 24-hour  $L_{eq}$  values of 70 dB (both outdoors and indoors).

The FHWA has adopted criteria for evaluating noise impacts associated with federally funded highway projects and for determining whether these impacts



are sufficient to justify funding noise mitigation actions (47 FR 131:29653-29656, July 8, 1982). The FHWA noise abatement criteria are based on peak hourly  $L_{eq}$  sound levels, not  $L_{dn}$  or 24-hour  $L_{eq}$  values. The peak 1-hour  $L_{eq}$  criteria for residential, educational, and health care facilities are 67 dB outdoors and 52 dB indoors. The peak 1-hour  $L_{eq}$  criterion for commercial and industrial areas is 72 dB (outdoors).

The U.S. Department of Housing and Urban Development has established guidelines for evaluating noise impacts on residential projects seeking financial support under various grant programs (44 FR 135:40860-40866, January 23, 1979). Sites are generally considered acceptable for residential use if they are exposed to outdoor  $L_{dn}$  values of 65 dB or less. Sites are considered “normally unacceptable” if they are exposed to outdoor  $L_{dn}$  values of 65-75 dB. Sites are considered unacceptable if they are exposed to outdoor  $L_{dn}$  values above 75 dB.

**State Agency Guidelines:** In 1987, the California Department of Health Services published guidelines for the noise elements of local general plans. These guidelines include a sound level/land use compatibility chart that categorizes various outdoor  $L_{dn}$  ranges into up to four compatibility categories (normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable) by land use. For many land uses, the chart shows overlapping  $L_{dn}$  ranges for two or more compatibility categories.

The noise element guidelines chart identifies the normally acceptable range for low-density residential uses as less than 60 dB and the conditionally acceptable range as 55-70 dB. The normally acceptable range for high-density residential uses is identified as  $L_{dn}$  values below 65 dB, and the conditionally acceptable range is identified as 60-70 dB. For educational and medical facilities,  $L_{dn}$  values below 70 dB are considered normally acceptable and  $L_{dn}$  values of 60-70 dB are considered conditionally acceptable. For office and commercial land uses,  $L_{dn}$  values below 70 dB are considered normally acceptable and  $L_{dn}$  values of 67.5-77.5 are categorized as conditionally acceptable.

These overlapping  $L_{dn}$  ranges are intended to indicate that local conditions (existing sound levels and community attitudes toward dominant sound sources) should be considered in evaluating land use compatibility at specific locations.

The California Department of Housing and Community Development has adopted noise insulation performance standards for new hotels, motels, and dwellings other than detached single-family structures (24 CCR T25-28). These standards require that “interior CNELs with windows closed, attributable to exterior sources, shall not exceed an annual CNEL of 45 dB in any habitable room”.

Caltrans uses the FHWA criteria as the basis for evaluating noise impacts from highway projects.

Reuse Plan Elements  
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## 4.6. Safety Element

State Law requires a Safety Element to outline policies and programs which will protect the Fort Ord Planning Area communities from both natural and human induced disasters. The Safety Element considers the following:

- Seismic and Geologic Hazards (4.6.1)
- Fire, Flood, and Emergency Management (4.6.2)
- Hazardous and Toxic Materials and Sites (4.6.3)

*Goal: To prevent or minimize loss of human life and personal injury, damage to property, and economic and social disruption potentially resulting from potential seismic occurrences and geologic hazards.*

### 4.6.1 Seismic and Geologic Hazards

#### 4.6.1.1 Summary of Existing Conditions

Following is a general description of seismic and geologic hazards at the former Fort Ord. A more detailed description of these conditions is included in the documents:

- Soils Baseline Study of Fort Ord, California (U. S. Army Corps of Engineers, Sacramento District 1992),
- Other Physical Attributes Baseline Study of Fort Ord, California, (U.S. Army Corps of Engineers, Sacramento District 1992),
- Volume I of the Final Environmental Impact Statement (FEIS), Section 4.3.6 on Fort Ord Disposal and Reuse (U. S. Army Corps of Engineers, Sacramento District 1993.), and
- Draft Supplemental Environmental Impact Statement (SEIS), Fort Ord Disposal and Reuse, (U. S. Army Corps of Engineers, Sacramento District December 1995).

#### **Seismic and Geologic Hazards**

The Monterey Bay area, including the former Fort Ord, is located within the Sand Andreas fault system, a zone of shearing caused by the relative vertical and horizontal motions of the North American and Pacific plates along fault lines.

Several inferred or concealed earthquake faults including the Reliz or Gabilam, Chupines, Ord Terrace, and Seaside faults, either cross or are adjacent to the former Fort Ord (See Figure 4.6-1 “Seismic Hazards” for an illustration of area fault lines). The first fault has possibly been active in the last 0.7 million years, and the latter three fault is have possibly been active in the last 1.6 million years. None show activity in the last 10,000 years, but the potential cannot be ruled out. The San Andreas fault, historically active in the last 200 years, is located within 25 miles of the former Fort Ord.

**Figure 4.6-1, Seismic Hazards**

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*



The Palo Colorado-San Gregorio fault, 14 miles southwest of the former Fort Ord, and the Monterey Bay fault zone, directly offshore of Fort Ord, both show evidence of recent earthquake activity. The Monterey Bay fault zone extends seaward of the Ord Terrace, Seaside, and Chupines faults. The maximum credible earthquake magnitude is greater than 6 for the Monterey Bay fault zone, greater than 7 for the Palo-Colorado-San Gregorio fault, and greater than 8 for the San Andreas.

Since the 1989 Loma Prieta earthquake, probability of a large earthquake of magnitude 7 or greater occurring in the San Francisco Bay area within the next 30 years is estimated to be approximately 67 percent. Expected ground-shaking for the Monterey Bay region either from a 7 or 8 magnitude earthquakes in the San Francisco or Monterey Bay areas would be significant.

The seismic hazards resulting from earthquakes are of two type, primary and secondary. Primary hazards include ground shaking and ground ruptures. Secondary hazards are those induced by primary hazards and include ground failure such as cracking and slope failures (landslides), liquefaction, and tsunamis (tidal waves) produced by off-shore earthquakes.

Figure 4.6-1 shows that most of the land area of the former Fort Ord is subject to moderately high ground shaking, although some areas are subject to higher potential. The Coastal beaches area of the Former Fort Ord has a very high ground-shaking potential, and areas of the base that overlie potentially active faults have high potential.

The potential of earthquake damage from seismic activity in the Fort Ord area is moderate to very high, with the highest potential in the coastal dune zone, due to ground shaking and tsunamis, and in the eastern zone (mostly in Monterey County) of the former Fort Ord due to ground failure and landslides from highly unstable soil formations and limitations.

Only minor earthquake damage was sustained at Fort Ord in the Loma Pietra earthquake of 1989. Cracks appeared in the concrete between Stilwell Hall and the dune cliffs because of the unstable condition of the cliffs, and a few cracks occurred in the Silas B. Hays Army Community Hospital because of ground shaking.

Approximately 8,000 buildings exist on the former Fort Ord. Most were built before modern seismic safety provisions were incorporated into California building codes and Department of the Army technical manuals.

### **Critical Facilities**

Seismic safety provisions of California building codes focus on buildings that receive concentrated public use, civic and emergency facilities, or house sensitive uses, such as schools and hospitals. Hazardous material storage sites area also considered sensitive facilities. Schools on the former Fort Ord are owned and operated by the Monterey Peninsula Unified School District on land leased from the federal government and are required to be in compliance with current



building codes relating to seismic safety. The former Silas B. Hays Army Community Hospital, which was completed in 1971, would require extensive modifications to comply with local and state seismic safety building codes required of in-patient healthcare facilities.

Geologic hazards relative to soil limitations and topography which could result in erosion, slope instability, and landslides conditions are discussed further in the Conservation Element.

**4.6.1.2 Objectives**

*Objective A: Protect and ensure public safety by regulating and directing new construction (location, type, and density) of public and private projects, and critical and sensitive facilities away from areas where seismic and geologic hazards are considered likely predicable so as to reduce the hazards and risks from seismic and geologic occurrences.*

The purpose of this objective is to consider the risk to human safety and property from seismic and geologic hazards when determining the location and intensity of development and the conditions under which they may occur. This includes critical and sensitive facilities such major roadways, power lines, hospitals, fire and police stations, public works centers, or sites containing or storing hazardous materials. This will ensure that structural damage and harm to persons within the urbanized portion of the former Fort Ord are protected against seismic and geologic occurrences.

*Objective B: Protect and ensure public safety by inventorying and regulating renovation of existing structures, including critical or sensitive facilities, at Fort Ord to current construction standards .*

The purpose of this objective is to ensure that in the event of extreme seismic shaking existing buildings, including masonry and critical or sensitive facilities will have been renovated to current construction standards to prevent or minimize loss of life, injury, or property damage.

*Objective C: Protect, ensure, and promote public safety through public education regarding earthquake preparedness and post-earthquake recovery practices.*

The purpose of this objective to better educate and prepare the general public for protection before, during and after an earthquake or geologic occurrence.

**4.6.1.3 Policies and Programs**

**City of Marina**

The following objectives, policies and programs are consistent with the existing City of Marina General Plan - Seismic Safety Element, which is herein incorporated by reference. The City of Marina has also adopted to incorporate by reference the Monterey County Seismic Safety Element under state law provisions in Section 65302(f) of the Government Code.



*Objective A: Protect and ensure public safety by regulating and directing new construction (location, type, and density) of public and private projects, and critical and sensitive facilities away from areas where seismic and geologic hazards are considered likely predictable so as to reduce the hazards and risks from seismic and geologic occurrences.*

**Seismic and Geologic Hazards Policy A-1:** The City shall develop standards and guidelines and require their use in new construction to provide the greatest possible protection for human life and property in areas where there is a high risk of seismic or geologic occurrence.

Program A-1.1: The City shall regularly update and make available descriptions and mapping of seismic and geologic hazard zones and associated risk factors for each, including feasible and effective engineering and design techniques that address the seismic and geologic hazard zone characteristics of the former Fort Ord. Seismic and geology hazard zones should include areas and risk factors associated with ground-shaking, ground rupture, ground failure and landslides susceptibility, liquefaction and tsunamis.

Program A-1.2: The City shall establish setback requirements for new construction, including critical and sensitive facilities, for each seismic hazard zone with a minimum of 200 feet setback to a maximum of one quarter (1/4) mile setback from an active seismic fault. Critical and sensitive buildings include all public or private buildings essential to the health and safety of the general public, hospitals, fire and police stations, public works centers, high occupancy structures, schools, or sites containing or storing hazardous materials.

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

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

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

Program A-2.3: The City shall continue to update and enforce the Uniform Building Code to minimize seismic hazards impacts from resulting from earthquake induced effects such as ground shaking, ground rupture, liquefaction, and or soils problems.

**Seismic and Geologic Hazards Policy A-3:** The City shall designate areas with severe seismic hazard risk as open space or similar use if adequate measures cannot be taken to ensure the structural stability of habitual buildings and ensure the public safety.





Program A-3.1: As appropriate, the City should amend its General Plan and zoning maps to designate areas with severe seismic hazard risk as open space if not other measures are available to mitigate potential impacts.

*Objective B: Promote public safety by inventorying and regulating renovation of existing structures, including critical or sensitive facilities at the former Fort Ord to current seismic safety standards.*

**Seismic and Geologic Hazards Policy B-1:** The City shall develop an inventory of critical and sensitive buildings and structures on the former Fort Ord, including all public or private buildings essential to the health and safety of the general public, hospitals, fire and police stations, public works centers, high occupancy structures, school, or sites containing or storing hazardous materials.

Program B-1.1: The City shall evaluate the ability of critical and sensitive buildings to maintain structural integrity as defined by the Uniform Building Code (UBC) in the event of a 6.0 magnitude or greater earthquake. The Public Works Director shall inventory those existing facilities determined to be unable to maintain structural integrity, and make recommendations for modifications and a schedule for compliance with the UBC. The City shall implement these recommendations in accordance with the schedule.

*Objective C: Protect, ensure, and promote public safety through public education regarding earthquake preparedness and post-earthquake recovery practices.*

**Seismic and Geologic Hazards Policy C-1:** The City shall, in cooperation with other appropriate agencies, create a program of public education for earthquakes which includes guidelines for retrofitting of existing structures for earthquake protection, safety procedures during an earthquake, necessary survival material, community resources identification, and procedures after an earthquake.

Program C-1.1: The City shall prepare and/or make available at City Hall libraries and other public places, information and educational materials regarding earthquake preparedness.

**City of Seaside**

The following objectives, policies and programs are consistent with the existing City of Seaside General Plan - Seismic Safety Element, which is herein incorporated by reference.

*Objective A: Protect and ensure public safety by regulating and directing new construction (location, type, and density) of public and private projects, and critical and sensitive facilities away from areas where seismic and geologic hazards are considered likely predicable so as to reduce the hazards and risks from seismic and geologic occurrences.*

**Seismic and Geologic Hazards Policy A-1:** The City of Seaside shall develop standards and guidelines and require their use in new construction to provide the greatest possible protection for human life and property in areas where there is a high risk of seismic or geologic occurrence.



Program A-1.1: The City shall regularly update and make available descriptions and mapping of seismic and geologic hazard zones and associated risk factors for each, including feasible and effective engineering and design techniques that address the seismic and geologic hazard zone characteristics of land under its jurisdiction at the former Fort Ord. Seismic and geology hazard zones should include areas and risk factors associated with ground-shaking, ground rupture, ground failure and landslides susceptibility, liquefaction and tsunamis.

Program A-1.2: The City shall establish setback requirements for new construction, including critical and sensitive facilities, for each seismic hazard zone with a minimum of 200 feet setback to a maximum of one quarter (1/4) mile setback from an active seismic fault. Critical and sensitive buildings include all public or private buildings essential to the health and safety of the general public, hospitals, fire and police stations, public works centers, high occupancy structures, schools, or sites containing or storing hazardous materials.

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

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

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

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

**Seismic and Geologic Hazards Policy A-3:** The City shall designate areas with severe seismic hazard risk as open space or similar use if adequate measures cannot be taken to ensure the structural stability of habitual buildings and ensure the public safety.

Program A-3.1: As appropriate, the City should amend its General Plan and zoning maps to designate areas with severe seismic hazard risk as open space if not other measures are available to mitigate potential impacts.

*Objective B: Promote public safety by inventorying and regulating renovation of existing structures, including critical or sensitive facilities at the former Fort Ord to current seismic safety standards.*



**Seismic and Geologic Hazards Policy B-1:** The City shall develop an inventory of critical and sensitive buildings and structures on the former Fort Ord, including all public or private buildings essential to the health and safety of the general public, hospitals, fire and police stations, public works centers, high occupancy structures, school, or sites containing or storing hazardous materials.

Program B-1.1: The City shall evaluate the ability of critical and sensitive buildings to maintain structural integrity as defined by the Uniform Building Code (UBC) in the event of a 6.0 magnitude or greater earthquake. The Public Works Director shall inventory those existing facilities determined to be unable to maintain structural integrity, and make recommendations for modifications and a schedule for compliance with the UBC. The City shall implement these recommendations in accordance with the schedule.

*Objective C: Protect, ensure, and promote public safety through public education regarding earthquake preparedness and post-earthquake recovery practices.*

**Seismic and Geologic Hazards Policy C-1:** The City shall, in cooperation with other appropriate agencies, create a program of public education for earthquakes which includes guidelines for retrofitting of existing structures for earthquake protection, safety procedures during an earthquake, necessary survival material, community resources identification, and procedures after an earthquake. Program C-1.1: The City shall prepare and/or make available at City Hall libraries and other public places, information and educational materials regarding earthquake preparedness.

**Monterey County**

The following objectives, policies and programs are consistent with the existing County of Monterey General Plan - Seismic Safety Element (1982), and the Monterey Peninsula Area Plan (1994) which is herein incorporated by reference.

*Objective A: Protect and ensure public safety by regulating and directing new construction (location, type, and density) of public and private projects, and critical and sensitive facilities away from areas where seismic and geologic hazards are considered likely predictable so as to reduce the hazards and risks from seismic and geologic occurrences.*

**Seismic and Geologic Hazards Policy A-1:** The County shall develop standards and guidelines and require their use in new construction to provide the greatest possible protection for human life and property in areas where there is a high risk of seismic or geologic occurrence.

Program A-1.1: The County shall regularly update and make available descriptions and mapping of seismic and geologic hazard zones and associated risk factors for each, including feasible and effective engineering and design techniques that address the seismic and geologic hazard zone characteristics of the former Fort Ord. Seismic and geology hazard zones should include areas and risk factors associated with ground shaking, ground rupture, ground failure and landslides susceptibility, liquefaction and tsunamis.



Program A-1.2: The County shall establish setback requirements for new construction, including critical and sensitive facilities, for each seismic hazard zone with a minimum of 200 feet setback to a maximum of one quarter (1/4) mile setback from an active seismic fault. Critical and sensitive buildings include all public or private buildings essential to the health and safety of the general public, hospitals, fire and police stations, public works centers, high occupancy structures, school, or sites containing or storing hazardous materials.

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

Program A-2.1: The County shall require geotechnical reports and seismic safety plans when development projects or area plans are proposed within zones that involve high or very high seismic risk. Each plan shall be prepared by a certified geotechnical engineer and shall be subject to the approval of the Planning Director for the County of Monterey.

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

Program A-2.3: The County shall continue to update and enforce the Uniform Building Code to minimize seismic hazards impacts from resulting from earthquake induced effects such as ground shaking, ground rupture, liquefaction, and or soils problems.

**Seismic and Geologic Hazards Policy A-3:** The County shall designate areas with severe seismic hazard risk as open space or similar use if adequate measures cannot be taken to ensure the structural stability of habitual buildings and ensure the public safety.

Program A-3.1: The County shall require construction project proponents to prepare and implement geotechnical reports and seismic safety plans for projects that involve high or moderate seismic risk. Each plan shall be prepared by a certified geotechnical engineer and shall be subject to the approval of the Planning Director for the County of Monterey.

*Objective B: Promote public safety by inventorying and regulating renovation of existing structures, including critical or sensitive facilities at the former Fort Ord to current seismic safety standards.*

**Seismic and Geologic Hazards Policy B-1:** The County shall develop an inventory of critical and sensitive buildings and structures on the former Fort Ord, including all public or private buildings essential to the health and safety of the general public, hospitals, fire and police stations, public works centers, high occupancy structures, school, or sites containing or storing hazardous materials.

Program B-1.1: The County shall evaluate the ability of critical and sensitive buildings to maintain structural integrity as defined by the Uniform Building Code (UBC) in the event of a 6.0 magnitude or greater earthquake. The Public Works Director shall inventory those existing facilities determined to be unable to maintain structural integrity, and make recommendations for modifications and a schedule for compliance with the UBC. The County shall implement these recommendations in accordance with the schedule.

*Objective C: Protect, ensure, and promote public safety through public education regarding earthquake preparedness and post-earthquake recovery practices.*

**Seismic and Geologic Hazards Policy C-1:** The County shall, in cooperation with other appropriate agencies, create a program of public education for earthquakes which includes guidelines for retrofitting of existing structures for earthquake protection, safety procedures during an earthquake, necessary survival material, community resources identification, and procedures after an earthquake.

Program C-1.1: The County shall prepare and/or make available at County libraries and other public places, information and educational materials regarding earthquake preparedness.



## 4.6.2 Fire, Flood, and Emergency Management

### 4.6.2.1 Summary of Existing Conditions

Following is a general description of fire, flood, and Emergency Management hazards at the former Fort Ord. A more detailed description of these conditions is included in the following documents:

- Volume I of the Final Environmental Impact Statement (FEIS), Section 4.3.6 on Fort Ord Disposal and Reuse (U. S. Army Corps of Engineers, Sacramento District 1993), and
- Draft Supplemental Environmental Impact Statement (SEIS), Fort Ord Disposal and Reuse (U. S. Army Corps of Engineers, Sacramento District December 1995).

#### **Fire Hazards**

Fire hazards exist at the former Fort Ord primarily as wildfire potential in open space and habitat areas. These areas contain grassland with many steeper areas containing brushland and wooded slopes (See Figure 4.6-2 “Fire and Flood Hazards and Evacuation Routes” for location of fire hazard areas). These occur in the eastern half of the Fort Ord Planning area, mostly in Monterey County’s unincorporated area. The State of California Department of Forestry rates these areas in Monterey County as extreme wildfire hazard areas. This rating is based on slope characteristics, climate, fuel loading and water availability.

Although the Fort Ord Reuse Plan concentrates most of the new development in already urbanized areas of the former Fort Ord (Seaside and Marina), future long-term development in Monterey County or in other jurisdictions, via land transfer and annexation, may occur in more rural areas where fire danger is highest.

Fire protection services for these high fire danger areas are provided by the U. S. Navy under an interservice support agreement with the Army until land transfers occur for the Army to the jurisdictions. An interagency automatic mutual aid agreement exists with the Salinas Rural Fire Protection District for fire suppression. Fort Ord property and former base structures are under the Navy interservice support agreement.

#### **Flood Hazards**

Flood hazards within the Fort Ord Reuse Plan area are localized north along the Salinas River Bluff within Monterey County. Recent storms in 1995 flooded portions of these areas impacting both agricultural land and some residential properties. Flood danger from reservoir ruptures within the Salinas Valley watershed (San Antonio or Nacimiento Reservoirs) could cause swelling of the Salinas River and could create a flood condition in the areas described above.

(See Figure 4.6-2 “Fire and Flood Hazards and Evacuation Routes” for location of flood hazard areas).

**Figure 4.6-2, Fire and Flood Hazards and Excavation Routes**

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*



## Emergency Management

Emergency management includes those facilities, personnel, and activities concerned with the ability to deal with disasters such as earthquake, fire, flood, or other natural crisis situations. The Fort Ord communities emergency management preparedness primarily concerns mobility - being able to respond to emergencies with the fullest extent of their resources. This means providing emergency supplies and equipment in the most effective manner possible. Emergency management programs include: transportation networks, evacuation routes, and emergency management team organization among of the cities of Marina and Seaside, and the County of Monterey, as well as those of the surrounding communities.

In the event of wildfire emergencies, the Fort Ord communities benefit from a U. S. Army agreement for fire protection with the U. S. Navy and a mutual aid agreement with the Salinas Rural Fire Protection District.

The former Silas B. Hays Army Community Hospital is now closed and other medical facilities at the former Fort Ord are restricted to POM Annex personnel. Medical emergency support is provided by local community clinics, hospitals, and emergency response service providers in the cities of Seaside, Monterey, Marina, and Salinas.

Existing road networks on the former Fort Ord are sufficient for current emergency uses; however, as the Reuse Plan is implemented, many street and emergency access design patterns will need to be upgraded to meet current standards, as represented by the Monterey County standards for emergency road access preparedness.

### 4.6.2.2 Objectives

*Objective A: Protect public safety by minimizing the risk from fire hazards especially wildfire in grassland and wooded areas in the Fort Ord region.*

*Objective B: Protect public safety by minimizing the risk from flooding and develop policies and implementation programs which will protect people from flooding.*

*Objective C: Protect the public safety through effective and efficient emergency management preparedness.*

### 4.6.2.3 Fire, Flood, and Emergency Management Policies and Programs

#### City of Marina

The following objectives, policies and programs are consistent with the existing City of Marina General Plan - Safety Element, which is herein incorporated by reference.

*Objective A: Protect public safety by minimizing the risk from fire hazards especially wildfire in grassland and wooded areas in the Fort Ord region.*





**Fire, Flood, and Emergency Management Policy A-1:** The City of Marina shall incorporate sections the Greater Monterey Peninsula Area Plan - Safety Element relative to wildfire management for areas which the City plans to annex and which pose high or extreme fire danger.

**Fire, Flood, and Emergency Management Policy A-2:** The City shall reduce fire hazard risks to an acceptable level by inventorying and assigning risk levels for wildfire hazards and regulating the type, density, location, and/or design and construction of new developments, both public and private.

Program A-2.1: The City shall incorporate the recommendations of the City Fire Department for all residential, commercial, industrial, and public works projects to be constructed in high fire hazard areas before a building permit can be issued. Such recommendations shall be in conformity with the current applicable Uniform Building Code Fire Hazards Policies. These recommendations should include standards of road widths, road access, building materials, distances around structures, and other standards for compliance with the UBC Fire Hazards Policies.

**Fire, Flood, and Emergency Management Policy A-3:** The City shall provide fire suppression water system guidelines and implementation plans for existing and acquired former Fort Ord lands equal to those recommended in the Fort Ord Infrastructure Study (FORIS Section Table 4.1.8 ) for fire protection water volumes, system distribution upgrades, and emergency water storage.

**Fire, Flood, and Emergency Management Policy A-4:** The City shall develop in cooperation with other Fort Ord jurisdictions and the surrounding communities fire protection agencies, a fire management plan to ensure adequate staff levels, response time, and fire suppression operations in high fire hazard areas of the former Fort Ord. The fire management plan shall also include a fire “fuel management program” in conjunction with the County of Monterey and the Bureau of Land Management.

Program A-4.1: The City shall develop with appropriate fire protection agencies, a mutual and/or automatic fire aid agreement to assure the most effective response.

Program A-4.2: The City shall develop a public education program on fire hazards and citizen responsibility, including printed material, workshops, or school programs, especially alerting the public to wildfire dangers, evacuation routes, fire suppression methods, and fuel management including methods to reduce fire hazards such as bush clearing, roof materials, plant selection, and emergency water storage guidelines.

**Fire, Flood, and Emergency Management Policy A-5:** The City shall evaluate the need for additional fire station and fire suppression facilities and manpower within areas of the former Fort Ord which the City plans to annex in order to provide acceptable fire/emergency response time.

*Objective B: Protect public safety by minimizing the risk from flooding and develop policies and implementation programs which will protect people from flooding.*



**Fire, Flood, and Emergency Management Policy B-1:** The City shall identify areas within the former Fort Ord that may be subject to 100-year flooding in the Salinas River Bluffs area and restrict construction of habitable building structures in this area.

*Objective C: Promote public safety through effective and efficient emergency management preparedness.*

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

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

Program C-1.2: The City shall establish a community education program to train volunteers to assist police, fire, and civil defense personnel during and after a major earthquake, fire, or flood.

Program C-1.3: The City shall identify a “critical facilities” inventory, and in conjunction with appropriate emergency and disaster agencies, establish guidelines for operations of such facilities during an emergency.

**City of Seaside**

The following objectives, policies and programs are consistent with the existing City of Seaside General Plan - Safety Element, which is herein incorporated by reference.

*Objective A: Protect public safety by minimizing the risk from fire hazards especially wildfire in grassland and wooded areas in the Fort Ord region.*

**Fire, Flood, and Emergency Management Policy A-1:** The City shall reduce fire hazard risks to an acceptable level by inventorying and assigning risk levels for wildfire hazards and regulating the type, density, location, and/or design and construction of new developments, both public and private.

Program A-1.1: The City shall incorporate the recommendations of the City Fire Department for all residential, commercial, industrial, and public works projects to be constructed in high fire hazard areas before a building permit can be issued. Such recommendations shall be in conformity with the current applicable Uniform Building Code Fire Hazards Policies. These recommendations should include standards of road widths, road access, building materials, distances around structures, and other standards for compliance with the UCB Fire Hazards Policies.



**Fire, Flood, and Emergency Management Policy A-2:** The City shall provide fire suppression water system guidelines and implementation plans for existing and acquired former Fort Ord lands equal to those recommended in the Fort Ord Infrastructure Study (FORIS Section Table 4.1.8) for fire protection water volumes, system distribution upgrades, and emergency water storage.

**Fire, Flood, and Emergency Management Policy A-3:** The City shall develop in cooperation with other Fort Ord jurisdictions and the surrounding communities fire protection agencies, a fire management plan to ensure adequate staff levels, response time, and fire suppression operations in high fire hazard areas of the former Fort Ord. The fire management plan shall also include a fire “fuel management program” in conjunction with the County of Monterey and the Bureau of Land Management.

Program A-3.1: The City shall develop, with appropriate fire protection agencies, a mutual and/or automatic fire aid agreement to assure the most effective response.

Program A-3.2: The City shall develop a public education program on fire hazards and citizen responsibility, including printed material, workshops, or school programs, especially alerting the public to wildfire dangers, evacuation routes, fire suppression methods, and fuel management including methods to reduce fire hazards such as bush clearing, roof materials, plant selection, and emergency water storage guidelines.

**Fire, Flood, and Emergency Management Policy A-4:** The City shall evaluate the need for additional fire station and fire suppression facilities and manpower within areas of the former Fort Ord which the City plans to annex in order to provide acceptable fire/emergency response time.

*Objective B: Protect public safety by minimizing the risk from flooding and develop policies and implementation programs which will protect people from flooding.*

**Fire, Flood, and Emergency Management Policy B-1:** The City shall identify areas within the former Fort Ord that may be subject to 100-year flooding and restrict construction of habitable building structures in this area.

*Objective C: Promote public safety through effective and efficient emergency management preparedness.*

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

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



Program C-1.2: The City shall establish a community education program to train volunteers to assist police, fire, and civil defense personnel during and after a major earthquake, fire, or flood.

Program C-1.3: The City shall identify a “critical facilities” inventory, and in conjunction with appropriate emergency and disaster agencies, establish guidelines for operations of such facilities during an emergency.

### **County of Monterey**

The following objectives, policies and programs are consistent with the existing County of Monterey Greater Monterey Peninsula Area Plan - Safety Element, which is herein incorporated by reference.

*Objective A: Protect public safety by minimizing the risk from fire hazards especially wildfire in grassland and wooded areas in the Fort Ord region.*

**Fire, Flood, and Emergency Management Policy A-1:** The County shall reduce fire hazard risks to an acceptable level by inventorying and assigning risk levels for wildfire hazards and regulating the type, density, location, and/or design and construction of new developments, both public and private.

Program A-1.1: The County shall incorporate the recommendations of the Salinas Rural Protection Fire District for all residential, commercial, industrial, and public works projects to be constructed at the former Fort Ord, in high fire hazard areas before a building permit can be issued. Such recommendations shall be in conformity with the current applicable Uniform Building Code Fire Hazards Policies. These recommendations should include standards of road widths, road access, building materials, distances around structures, and other standards for compliance with the UCB Fire Hazards Policies.

**Fire, Flood, and Emergency Management Policy A-2:** The County shall provide fire suppression water system guidelines and implementation plans for existing and acquired former Fort Ord lands equal to or greater than those recommended in the Fort Ord Infrastructure Study (FORIS Section Table 4.1.8 ) for fire protection water volumes, system distribution upgrades, and emergency water storage.

**Fire, Flood, and Emergency Management Policy A-3:** The County shall develop in cooperation with other Fort Ord jurisdictions and the surrounding communities fire protection agencies, a fire management plan to ensure adequate staff levels, response time, and fire suppression operations in high fire hazard areas of the former Fort Ord. The fire management plan shall also include a fire “fuel management program” in conjunction with the Bureau of Land Management.

Program A-3.1: The County shall develop, with appropriate fire protection agencies, a mutual and/or automatic fire aid agreement to assure the most effective response.

Program A-3.2: The County shall develop a public education program on fire hazards and citizen responsibility, including printed material, workshops, or



school programs, especially alerting the public to wildfire dangers, evacuation routes, fire suppression methods, and fuel management including methods to reduce fire hazards such as bush clearing, roof materials, plant selection, and emergency water storage guidelines.

**Fire, Flood, and Emergency Management Policy A-4:** The County shall evaluate the need for additional fire station and fire suppression facilities and manpower within areas of the former Fort Ord which the County plans to develop in order to provide acceptable fire/emergency response time.

*Objective B: Protect public safety by minimizing the risk from flooding and develop policies and implementation programs which will protect people from flooding.*

**Fire, Flood, and Emergency Management Policy B-1:** The County shall identify areas within the former Fort Ord that may be subject to 100-year flooding in the Salinas River Bluffs area and restrict construction of habitable building structures in this area.

*Objective C: Promote public safety through effective and efficient emergency management preparedness.*

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

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

Program C-1.2: The County shall establish a community education program to train volunteers to assist police, fire, and civil defense personnel during and after a major earthquake, fire, or flood.

Program C-1.3: The County shall identify a "critical facilities" inventory, and in conjunction with appropriate emergency and disaster agencies, establish guidelines for operations of such facilities during an emergency.

### 4.6.3 Hazardous and Toxic Materials Safety

#### 4.6.3.1 Summary of Existing Conditions

Hazardous and toxic waste site remediation at the former Fort Ord falls into two major categories: 1) hazardous and toxic waste sites (including buildings, landfills, storage facilities, and open air sites, and 2) ordnance and explosives (including unexploded ordnance) at various firing ranges.

The following is a general description of hazardous and toxic materials, and ordnance and explosives hazards at the former Fort Ord. A more detailed description of these conditions is included in the following documents, including



references to existing U. S. Army documents relevant to assessments and plans for live ordnance and explosives:

- Volume I of the Final Environmental Impact Statement (FEIS), Section 4.3.6 on Fort Ord Disposal and Reuse (U. S. Army Corps of Engineers, Sacramento District 1993.),
- Draft Supplemental Environmental Impact Statement (SEIS), Fort Ord Disposal and Reuse (U. S. Army Corps of Engineers, Sacramento District, December 1995).

*Goal: To prevent or minimize loss of human life and personal injury, damage to property, and economic and social disruption potentially resulting from hazardous and toxic materials.*

### **Hazardous and Toxic Waste Sites**

Fort Ord was added to the February 21, 1990 “Superfund” National Priorities List of Hazardous Waste Sites. The identification, remediation, and disposal of hazardous waste associated with the Superfund cleanup process of Fort Ord takes place under the Federal Facilities Agreement (FFA). The Army is responsible for conducting the Superfund cleanup process, and EPA is the lead agency for regulatory enforcement and oversight of Superfund activities. The Army is also required to submit findings to the California EPA.

Significant progress is occurring in the Army’s process of remediation. A remedial investigation/feasibility study (RI/FS) has been approved by the regulatory agency signatories to the federal facilities agreement. This agreement provides for identification and remediation action and criteria for the eventual certifying of the lands as clean or protective of human health and environment.

The federal facilities agreement, as well as the remedial action record of decision (RA-ROD) identify the Army’s responsibility for long-term monitoring and cleanup. They will serve as a key document for the Fort Ord communities action in acquiring Public and Economic Benefit Conveyance land at Fort Ord as well as a timeframe and set of criteria for measuring the suitability of land for development and reuse.

The RA-ROD is a compilation of remedial action plans for the hazardous and toxic sites on the former Fort Ord. See Figure 4.6-3 for an illustration of areas of hazardous and toxic waste sites. The RA-ROD also defines the clean-up levels and the estimated time to remediation. These sites are discussed fully in the RI/FS and remedial action ROD and are more completely discussed in the Final EIS and the Supplemental EIS. The Army is also responsible for characterizing and removing unexploded ordnance. This cleanup process involves historical record reviews, site characterization, surface clearance, and possible subsurface clearance of unexploded ordnance.

Hazardous and toxic waste materials (HTW) and sites at the former Fort Ord consist of a wide variety of materials including: industrial 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.



## **Ordnance and Explosives**

Ordnance and explosives (OE), including the sub-set of unexploded ordnance (UXO) are composed of: bombs, artillery, mortar, rocket and small arms ammunition, mines, demolition charges, pyrotechnics, grenades, high explosives and propellants.

Most of OE material is in the inland rainfire ranges. This area consists of the 8,000-acre inland range area which includes unexploded ordnance. Underground wastes, which could result from leaching of surface residue from these OE, have also been evaluated as part of the installation-wide RI/FS.

The highest density of unexploded ordnance and spent ammunition is expected in the central portion of the inland range area. Lower densities of unexploded ordnance are expected in the outer portions of the inland range area and in the training areas to the north and east of the inland range area. Coastal beach firing ranges are also included in the classification of lower density OE and UXO.

Identification of these sites is detailed in the Ordnance and Explosive Waste and Archive Search Report (ASR) and cleanup of the sites is detailed in the remedial action ROD. In addition, the Army and the Bureau of Land Management have completed the Site Use Management Plan for

Land Transfer and Reuse of the various OE ranges. The site use plan is characterized by four levels which represent current expectations for future public use after the sites are remediated to the fullest extent possible: 1) U-unrestricted to public, 2) UB-unrestricted to BLM personnel only, 3) LA-limited access for specific uses for as limited pedestrian and nonmotorized access and emergency/maintenance vehicles, and 4) RA-restricted/administrative for areas with high-impact OE and is off-limits to the general public. The restricted areas will be fenced and access is severely limited, providing only for BLM training exercises, fire suppression, and habitat monitoring. These areas contain a high density of OE/UXO and these areas are not expected to be cleared unless new technology allows for cost-effective clearance.

## **Future Use of Hazardous Materials**

There is potential for the use of hazardous materials by CSUMB educational labs and by the UC MBEST Center in educational settings, research, and potential manufacturing processes. Also, hazardous materials may be utilized in the light industrial areas designated at the former Fort Ord.

*Objective C: Ensure public safety in the future handling of hazardous materials on land at the former Fort Ord.*

The potential exists that current and future uses at the former Fort Ord will generate the use of hazardous materials. The safe handling and disposal of these materials must be planned for and ensured by land use jurisdictions.



### **Figure 4.6-3, Hazardous and Toxic Waste Sites**

*This figure can be found within the “Maps” section off the homepage of the FORA CD-ROM Application.*





### **4.6.3.2 Objectives**

*Objective A: Ensure the timely and complete compliance by the U. S. Army with the Remedial Investigation/Feasibility Study and associated remedial action ROD as part of the land transfer process.*

Because Fort Ord is on the National Priorities List as a Superfund site, the base closure hazardous material clearance process for various sites must be investigated, characterized, and remediated before disposal and before land is transferred. The Army's document of record for hazardous material and site remediation is the remedial action ROD (RA-ROD). This document contains plans for engineering, level of clearance, cost analysis, community education, and site maintenance and emergency response plans.

*Objective B: Protect and ensure public safety during the remediation of hazardous and toxic materials sites on Fort Ord including clearance, treatment, transport, disposal, and/or closure of such sites containing ordnance and explosives, landfills, above and below ground storage facilities, and buildings with asbestos and/or lead base paint.*

Remediation of hazardous materials sites on the former Fort Ord will be an long-term process for many of the sites, while land transfer is occurring for many Fort Ord properties. The public should be aware of hazardous sites and the process of remediation. The information contained in the RA-ROD should be included in transfer documents to alert property recipients of the potential for remediation and OE presence, including the level of public access to these sites. Reuse of these areas may be restricted by property deed covenants and restrictions.

### **4.6.3.3 Hazardous and Toxic Materials Safety Policies and Programs**

#### ***City of Marina***

The existing City of Marina General Plan - Safety Element, is herein incorporated by reference and is included, where policies are appropriated, as part of the policies and programs of this Safety Element.

*Objective A: Ensure the timely and complete compliance by the U. S. Army with the Remedial Investigation/Feasibility Study and associated remedial action ROD as part of the land transfer process.*

**Hazardous and Toxic Materials Safety Policy A-1:** The City shall monitor and report to the public all progress made on the RA-ROD.

Program A-1.1: The City shall make timely reviews of the RA-ROD implementation progress and maintain a public record of property locations which contain hazardous material, including a timetable for and the extent of remediation to be expected.

Program A-1.2: The City shall make timely reviews of the Army's RA-ROD implementation progress and report to the public the Army's compliance with



all of the federal Environmental Protection Agency's rules and regulations governing munitions waste remediation including treatment, storage, transportation, and disposal.

Program A-1.3: All construction plans for projects in the City/County shall be reviewed by the Presidio of Monterey, Directorate of Environmental and Natural Resources Management (DENR), to determine if construction is planned within known or potential OE areas unless an alternative mechanism is approved by the City/County and DENR.

Program A-1.4: Before construction activities commence on any element of the proposed project, all supervisors and crews shall attend an Army sponsored OE safety briefing. This briefing will identify the variety of OE that are expected to exist on the installation and the actions to be taken if a suspicious item is discovered.

*Objective B: Protect and ensure public safety during the remediation of hazardous and toxic materials sites on the former Fort Ord including clearance, treatment, transport, disposal, and/or closure of such sites containing ordnance and explosives, landfills, above and below ground storage facilities, and buildings with asbestos and/or lead base paint.*

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

Program B-1.1: The City shall develop and make available a list of the locations and timeframe for remediation of buildings scheduled for renovation which contain asbestos and/or lead base paint.

Program B-1.2: The City shall ensure public safety for asbestos and/or lead paint removal by reviewing remediation plans and determining that such remediation is being conducted by licensed and certified asbestos abatement and building demolition contractors.

Program B-1.3: The City shall develop and make available a list of the locations and timeframe for remediation of those site containing ordnance and explosive (OE) and shall work cooperatively with responsible agencies, including the Bureau of Land Management, in notification, monitoring, and review of administrative covenants for the reuse or closure of such OE sites.

Program B-1.4: The City shall require, by resolution, permits from all hazardous remediation contractors for the transport of hazardous material, including ordnance and explosives, through City streets. The permit will require disclosure of the type, volume, risk factor, transport routes and any other such information deemed necessary by the City for protection of the public safety.



**Hazardous and Toxic Materials Safety Policy B-2:** The City shall monitor implementation procedures of the RA-ROD and work cooperatively with the U. S. Army and all contractors and future users/operators of landfill or hazardous materials storage sites at the former Fort Ord.

Program B-2.1: The City shall develop and make available a list of the locations and timeframe for remediation of landfill or hazardous materials storage sites, including closure and postclosure activities.

Program B-2.2: The City shall review and make public its review of administrative covenants on remediation of landfills or hazardous materials storage to ensure that landfill closure or hazardous materials storage and restoration activities are complete and in compliance with all applicable regulations, that liability responsibilities are identified to entities intending to use the landfill, and that such uses are consistent with the administrative covenants and all post closure activities.

**Hazardous and Toxic Materials Safety Policy B-3:** The City shall follow all applicable procedures and regulations for the Marina Municipal Airport (formerly Fritzsche Airfield) underground and above ground storage tanks, maintenance inventory and documentation of hazardous material and dispose of hazardous waste at properly certified facilities.

*Objective C: Ensure public safety in the future handling of hazardous materials on land at the former Fort Ord.*

**Hazardous and Toxic Materials Safety Policy C-1:** The City of Marina shall require hazardous materials management and disposal plans for any future projects involving the use of hazardous materials.

Program C-1.1: The City of Marina shall review the use of hazardous materials as a part of environmental review and/or include as a condition of project approval a hazardous materials management and disposal plan, subject to review by the County Environmental Health Department.

### **City of Seaside**

The existing City of Seaside General Plan - Public Safety Element, is herein incorporated by reference and is include, where policies are appropriated, as part of the policies and programs of this Safety Element.

*Objective A: Ensure the timely and complete compliance by the U. S. Army with the Remedial Investigation/Feasibility Study and associated remedial action ROD as part of the land transfer process.*

**Hazardous and Toxic Materials Safety Policy A-1:** The City shall monitor and report to the public all progress made on the RA-ROD.

Program A-1.1: The City shall perform timely reviews of the RA-ROD implementation progress and maintain a public record of property locations which contain hazardous material, including a timetable for and the extent of remediation to be expected.



Program A-1.2: The City shall perform timely reviews of the Army's RA-ROD implementation progress and report to the public the Army's compliance with all of the federal Environmental Protection Agency's rules and regulations governing munitions waste remediation including treatment, storage, transportation, and disposal.

Program A-1.3: All construction plans for projects in the City/County shall be reviewed by the Presidio of Monterey, Directorate of Environmental and Natural Resources Management (DENR), to determine if construction is planned within known or potential OE areas unless an alternative mechanism is approved by the City/County and DENR.

Program A-1.4: Before construction activities commence on any element of the proposed project, all supervisors and crews shall attend an Army sponsored OE safety briefing. This briefing will identify the variety of OE that are expected to exist on the installation and the actions to be taken if a suspicious item is discovered.

*Objective B: Protect and ensure public safety during the remediation of hazardous and toxic materials sites on the former Fort Ord including clearance, treatment, transport, disposal, and/or closure of such sites containing ordnance and explosives, landfills, above and below ground storage facilities, and buildings with asbestos and/or lead base paint.*

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

Program B-1.1: The City shall develop and make available a list of the locations and timeframe for remediation of buildings scheduled for renovation which contain asbestos and/or lead base paint.

Program B-1.2: The City shall ensure public safety for asbestos and/or lead paint removal by reviewing remediation plans and determining that such remediation is being conducted by licensed and certified asbestos abatement and building demolition contractors.

Program B-1.3: The City shall develop and make available a list of the locations and timeframe for remediation of those site containing ordnance and explosive (OE) and shall work cooperatively with responsible agencies, including the Bureau of Land Management, in notification, monitoring, and review of administrative covenants for the reuse or closure of such OE sites.

Program B-1.4: The City shall require, by resolution, permits from all hazardous remediation contractors for the transport of hazardous material, including ordnance and explosives, through City streets. The permit will require disclosure of the type, volume, risk factor, transport routes and any other such information deemed necessary by the City for protection of the public safety.



**Hazardous and Toxic Materials Safety Policy B-2:** The City shall monitor implementation procedures of the RA-ROD and work cooperatively with the U. S. Army and all contractors and future users/operators of landfill or hazardous materials storage sites at the former Fort Ord.

Program B-2.1: The City shall develop and make available a list of the locations and timeframe for remediation of landfill or hazardous materials storage sites, including closure and postclosure activities.

Program B-2.2: The City shall review and make public its review of administrative covenants on remediation of landfills or hazardous materials storage to ensure that hazardous materials storage remediation activities are complete and in compliance with all applicable regulations, that liability responsibilities are identified to entities intending to use these landfills, and that such uses are consistent with the administrative covenants and all post closure activities.

*Objective C: Ensure public safety in the future handling of hazardous materials on land at the former Fort Ord.*

**Hazardous and Toxic Materials Safety Policy C-1:** The City of Seaside shall require hazardous materials management and disposal plans for any future projects involving the use of hazardous materials.

Program C-1.1: The City of Seaside shall review the use of hazardous materials as a part of environmental review and/or include as a condition of project approval a hazardous management and disposal plan, subject to review by the County Environmental Health Department.

### **County of Monterey**

The existing County of Monterey General Plan and Greater Monterey Peninsula Area Plan - relative to Miscellaneous Hazards, is herein incorporated by reference and is include, where policies are appropriated, as part of the policies and programs of this Safety Element.

*Objective A: Ensure the timely and complete compliance by the U. S. Army with the Remedial Investigation/Feasibility Study and associated remedial action ROD as part of the land transfer process.*

**Hazardous and Toxic Materials Safety Policy A-1:** The County shall monitor and report to the public all progress made on the RA-ROD.

Program A-1.1: The County shall perform timely reviews of the RA-ROD implementation progress and maintain a public record of property locations which contain hazardous material, including a timetable for and the extent of remediation to be expected.

Program A-1.2: The County shall perform timely reviews of the Army's RA-ROD implementation progress and report to the public the Army's compliance with all of the federal Environmental Protection Agency's rules and regulations governing munitions waste remediation including treatment, storage, transportation, and disposal.



Program A-1.3: All construction plans for projects in the City/County shall be reviewed by the Presidio of Monterey, Directorate of Environmental and Natural Resources Management (DENR), to determine if construction is planned within known or potential OE areas unless an alternative mechanism is approved by the City/County and DENR.

Program A-1.4: Before construction activities commence on any element of the proposed project, all supervisors and crews shall attend an Army sponsored OE safety briefing. This briefing will identify the variety of OE that are expected to exist on the installation and the actions to be taken if a suspicious item is discovered.

*Objective B: Protect and ensure public safety during the remediation of hazardous and toxic materials sites on the former Fort Ord including clearance, treatment, transport, disposal, and/or closure of such sites containing ordnance and explosives, landfills, above and below ground storage facilities, and buildings with asbestos and/or lead base paint.*

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

Program B-1.1: The County shall develop and make available a list of the locations and timeframe for remediation of buildings scheduled for renovation which contain asbestos and/or lead base paint.

Program B-1.2: The County shall ensure public safety for asbestos and/or lead paint removal by reviewing remediation plans and determining that such remediation is being conducted by licensed and certified asbestos abatement and building demolition contractors.

Program B-1.3: The County shall develop and make available a list of the locations and timeframe for remediation of those site containing ordnance and explosive (OE) and shall work cooperatively with responsible agencies, including the Bureau of Land Management, in notification, monitoring, and review of administrative covenants for the reuse or closure of such OE sites.

Program B-1.4: The County shall require, by resolution, permits from all hazardous remediation contractors for the transport of hazardous material, including ordnance and explosives, through County streets. The permit will require disclosure of the type, volume, risk factor, transport routes and any other such information deemed necessary by the County for protection of the public safety.

**Hazardous and Toxic Materials Safety Policy B-2:** The County shall monitor implementation procedures of the RA-ROD and work cooperatively with the U. S. Army and all contractors and future users/operators of landfill or hazardous materials storage sites at the former Fort Ord.



Program B-2.1: The County shall develop and make available a list of the locations and timeframe for remediation of landfills or hazardous materials storage sites, including closure and postclosure activities.

Program B-2.2: The County shall review and make public its review of administrative covenants on remediation of landfills or hazardous materials storage to ensure that remediation activities related to landfill closure and hazardous materials storage are complete and in compliance with all applicable regulations, that liability responsibilities are identified to entities intending to use these landfills, and that such uses are consistent with the administrative covenants and all post closure activities.

*Objective C: Ensure public safety in the future handling of hazardous materials on land at the former Fort Ord.*

**Hazardous and Toxic Materials Safety Policy C-1:** The County of Monterey shall require hazardous materials management and disposal plans for any future projects involving the use of hazardous materials.

Program C-1.1: The County of Monterey shall review the use of hazardous materials as a part of environmental review and/or include as a condition of project approval a hazardous materials management and disposal plan, subject to review by the County Environmental Health Department.

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